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ANNUAL REPORT

OF THE

COMMISSIONER OF PATENTS

FOR

THE YEAR 1877.

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WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1878.

LETTER

FROM THE

COMMISSIONER OF PATENTS.

JANUARY 30, 1878.—Referred to the Committee on Patents.

MARCH 5, 1878.—Recommitted to the Committee on Patents and ordered to be printed.

DEPARTMENT OF THE INTERIOR, PATENT OFFICE,
Washington, D. C., January 30, 1878.

SIR: I have the honor to transmit herewith a report of the transactions and condition of this Office, with lists of patents and patentees, as required by section 494 Revised Statutes.

I have the honor to be, very respectfully, your obedient servant,

ELLIS SPEAR,
Commissioner of Patents.

To the Hon. SAMUEL J. RANDALL,
Speaker of the House of Representatives.

ANNUAL REPORT

OF THE

COMMISSIONER OF PATENTS

FOR THE YEAR 1877.

To the Senate and House of Representatives of the United States of America in Congress assembled:

In compliance with section 494 Revised Statutes, I submit the following report for the year ending December 31, 1877:

1. *Statement of moneys received.*

Amount received on applications for patents, reissues, designs, extensions, caveats, disclaimers, appeals, and trade-marks	$651,569 00
Amount received for copies of specifications, drawings, and other papers	48,193 01
Amount received for recording assignments	20,047 15
Amount received for subscription to the Official Gazette	9,497 69
Amount received for registration of labels	3,036 00
Total	732,342 85

2. *Statement of moneys expended.*

Amount paid for salaries		$398,024 54
Amount paid for photolithographing current issues		36,103 13
Amount paid for photolithographing back issues		30,303 02
Amount paid for illustrations for Gazette		41,084 34
Amount paid for tracings of drawings		33,306 73
Amount paid for contingent and miscellaneous expenses, viz:		
Stationery	$5,918 98	
Painting, glazing, varnishing, upholstering, &c	830 57	
Furniture, carpets, &c	2,120 78	
Fitting up cases in model-rooms, carpenters' work, lumber, and repairing furniture	7,262 41	
Plumbing and gas-fitting	107 95	
English patents and foreign periodicals	1,334 53	
Hardware	611 15	
Pay of temporary clerks and extra laborers	44,525 26	
Miscellaneous items, viz: Books for library, ice, subscriptions to journals, freight, washing towels, withdrawals, money refunded paid by mistake, repairing carriage and harness, keeping horse, advertising, printer's material, rubber stamps, drawing-instruments, cleaning carpets, paste, disinfectants, file-holders, decisions of courts, expenses attending preservation and protection of file-records and property of the Office at fire of September 24, 1877, and during subsequent rains, &c	8,942 73	
		71,654 36
Total		610,476 12

3. *Statement of the balance in the Treasury of the United States on account of the patent fund.*

Amount to the credit of the patent fund January 1, 1877	$992,354 67
Amount of receipts during the year 1877	732,342 85
Total	1,724,697 52
From which deduct expenditures for the year 1877	610,476 12
Balance January 1, 1878	1,114,221 40

4. *Statement of the business of the Office for the year* 1877.

Number of applications for patents, including designs, during the year 1877	20,308
Number of applications for reissues of patents	639
Number of patents issued, including designs	13,619
Number of patents reissued	568
Number of applications for extension of patents	2
Number of patents extended	2
Number of caveats filed during the year	2,809
Number of patents, including designs, expired during the year	862
Number of patents allowed but not issued for want of final fee	807
Number of applications for registering of trade-marks	1,416
Number of trade-marks registered	1,216
Number of applications for registering of labels	632
Number of labels registered	392

Of the patents granted, including designs, there were to—

Citizens of the United States	13,029
Subjects of Great Britain (including Canada, 145)	362
Subjects of France	72
Subjects of Germany	91
Subjects of other foreign governments	65
Total	13,619

5 *Number of patents, including designs, issued by the United States Patent Office to residents of the different States and Territories from January* 1, 1877, *to December* 31, 1877.

[The proportion of patents and designs to population is shown in the last column.]

States, &c.	Patents and designs.	One to every—
Alabama	43	23,418
Arizona Territory	2	4,829
Arkansas	36	13,513
California	341	1,642
Colorado	28	1,423
Connecticut	607	885
Dakota Territory	6	2,365
Delaware	28	4,464
District of Columbia	123	1,060
Florida	14	13,410
Georgia	63	18,795
Idaho Territory	1	14,999
Illinois	1,046	2,429
Indiana	450	3,734
Iowa	428	2,655
Kansas	103	3,538
Kentucky	151	8,748
Louisiana	79	9,073
Maine	132	4,749
Maryland	192	4,067
Massachusetts	1,392	1,046
Michigan	383	3,091
Minnesota	146	3,011
Mississippi	39	21,228
Missouri	365	4,715
Montana Territory	3	6,865
Nebraska	36	3,416

5. *Number of patents, including designs, &c.*—Continued.

States, &c.	Patents and designs.	One to every—
Nevada	24	1,770
New Hampshire	78	4,080
New Jersey	502	1,804
New Mexico Territory	3	30,624
New York	2,496	1,755
North Carolina	51	21,007
Ohio	1,083	2,460
Oregon	38	2,392
Pennsylvania	1,515	2,325
Rhode Island	212	1,025
South Carolina	34	20,753
Tennessee	114	11,039
Texas	115	7,117
Utah Territory	4	21,696
Vermont	58	5,733
Virginia	100	12,251
Washington Territory	4	5,988
West Virginia	31	14,258
Wisconsin	245	4,304
Wyoming Territory	9	1,014
United States Army	14	
United States Navy	2	
	13,029	2,959
Foreign	590	
Total	13,619	

6. *Comparative statement of the business of the Office from 1837 to 1877, inclusive.*

Year.	Applications.	Caveats filed.	Patents issued.	Cash received.	Cash expended.	Surplus.
1837			435	$29,289 08	$33,506 98	
1838			520	42,123 54	37,402 10	$4,721 44
1839			425	37,260 00	34,543 51	2,716 49
1840	735	228	473	38,056 51	39,020 67	
1841	847	312	495	40,413 01	52,666 87	
1842	761	391	517	36,505 68	31,241 48	5,264 20
1843	819	315	531	35,315 81	30,776 96	4,538 85
1844	1,045	380	502	42,509 26	36,244 73	6,264 53
1845	1,246	452	502	51,076 14	39,395 65	11,680 49
1846	1,272	448	619	50,264 16	46,158 71	4,105 45
1847	1,531	553	572	63,111 19	41,878 35	21,232 84
1848	1,628	607	660	67,576 69	58,905 84	8,670 85
1849	1,955	595	1,070	80,752 98	77,716 44	3,036 54
1850	2,193	602	995	86,927 05	80,100 95	6,816 10
1851	2,258	760	869	95,738 61	86,916 93	8,821 68
1852	2,639	996	1,029	112,656 34	95,916 91	16,739 43
1853	2,673	901	958	121,527 45	132,869 83	
1854	3,328	808	1,902	163,789 84	167,146 32	
1855	4,435	906	2,024	216,459 35	179,540 33	36,919 02
1856	4,960	1,024	2,502	192,588 02	199,931 02	
1857	4,771	1,010	2,910	196,132 01	211,582 09	
1858	5,364	934	3,710	203,716 16	193,193 74	10,522 42
1859	6,225	1,097	4,538	245,942 15	210,278 41	35,663 74
1860	7,653	1,084	4,819	256,352 59	252,820 80	3,531 79
1861	4,643	700	3,340	137,354 44	221,491 91	
1862	5,038	824	3,521	215,754 99	182,810 39	32,944 60
1863	6,014	787	4,170	195,593 29	189,414 14	6,179 15
1864	6,932	1,063	5,020	240,919 98	229,868 00	11,051 98
1865	10,664	1,937	6,616	348,791 84	274,199 34	74,592 50
1866	15,269	2,723	9,450	495,665 38	361,724 28	133,941 10
1867	21,276	3,597	13,015	646,581 92	639,263 32	7,318 60
1868	20,420	3,705	13,378	681,565 86	628,679 77	52,886 09
1869	19,271	3,624	13,986	693,145 81	486,430 78	206,715 03
1870	19,171	3,273	13,321	669,456 76	557,149 19	112,307 57
1871	19,472	3,366	13,033	678,716 46	560,595 08	118,121 38
1872	18,246	3,090	13,590	699,726 39	665,591 36	34,135 03
1873	20,414	3,248	12,864	703,191 77	691,178 98	12,012 79
1874	21,602	3,181	13,599	738,278 17	679,288 41	58,989 76
1875	21,638	3,094	‡16,288	743,453 36	721,657 71	21,795 65
1876	21,425	2,697	‡17,026	757,987 65	652,542 60	105,445 05
1877	*20,308	2,809	*13,619	732,342 85	†613,152 62	119,190 23

* Including designs.
† Including $2,677.50 expended for restoring models, &c., damaged by fire.
‡ Includes trade-marks and labels.

RECEIPTS AND EXPENDITURES.

The above tables show a diminution in the receipts, expenditures, the number of applications filed, and the number of patents granted, compared with some previous years.

The number of applications for patents fluctuates from year to year, owing to many different causes; but there is no doubt that the increased facilities which this Office, by its publications, has afforded the public in the matter of the examination into the state of the various arts, have affected, and will continue to affect, to a great extent, the number and character of applications, as well as of patents. A less number of applications, covering old fields of invention, will be filed, and a corresponding improvement will be found in the character of patents granted.

The receipts for this Office for the past year in fees have exceeded its entire expenditures, not including the printing, to the amount of $121,867.73. If comparison were made alone between the amount of receipts and the amount of current expenses, the surplus of receipts would be about $180,000, nearly $60,000 being paid during the past year for the reproduction of patents issued prior to 1871, and not properly chargeable to the current expenses of the Office.

The total amount of expenditures for the past year, $610,475.12, is less than any year since 1871. This reduction is due, in part, to the smaller appropriations for the reproduction of the drawings of old patents. It should be added that a large draft has been made on the contingent fund by reason of the late fire.

PHOTOLITHOGRAPHIC REPRODUCTION OF DRAWINGS.

The work of making copies of the drawings of patents granted prior to 1871, by reproducing them by the photolithographic process, was commenced in the summer of 1871.

The first step necessary to be taken in preparing the original drawings to be photolithographed is tracing the same with ink on muslin by hand. This preparatory work for the entire number of old drawings, amounting to 100,000, will be completed by March 31, 1878. The completion of 150 photolithographic copies of each of these drawings will speedily follow. Unfortunately, the recent fire destroyed about 31,000 and injured 16,000 more of the sets of photolithographs. The copies entirely destroyed include the important classes of Agricultural Implements, Land Conveyances, and Philosophical Instruments. For their reproduction an appropriation of $30,000 will be elsewhere asked, and is now, also, earnestly recommended. But no new tracings of the drawings just mentioned will be necessary.

The importance of this work cannot be overestimated. For the convenience of the Office and the public, the subjects of inventions are divided into 158 classes. The drawings of each class are numbered, named, and dated to correspond with the patents, and arranged in suitable portfolios, so that they can be easily inspected in making examinations into the state of the art. Drawings for sale are similarly arranged. It will be seen at a glance, under such arrangement, how valuable to the public is an accessible collection of patented drawings, and the great outlay necessary to their production will be more than repaid in a few years by the proceeds derived from the sales of the photolithographic copies. These proceeds already amount annually to ten or twelve thousand dollars.

PRINTING OF PATENTS GRANTED PRIOR TO 1867.

Closely allied to this subject of the reproduction of

the drawings of back issues are the considerations which indicate the necessity for reproducing the specifications of patents granted prior to November 20, 1866. By some strange oversight the government neglected, up to that time, to print the patents. To fill the constant demand, therefore, the office is compelled to furnish manuscript copies of the specifications of inventions patented prior to that date, at the rate of ten cents per folio of one hundred words. This is a tedious and expensive process. Fifty or more copyists are constantly employed for this purpose; but even with this force orders are often delayed, greatly to the detriment of private and public interests. Under the present system, requiring examination of every application filed, the necessity is forced upon the Office and the public of looking through this vast mass of manuscript matter to ascertain the previous state of an art Except by means of expensive copies, this wide field of information is not open to the public outside of Washington; and the business of the United States courts, in patent matters, is frequently delayed and embarrassed by the same slow and imperfect process of procuring copies of these valuable public documents. The manuscript certified copies furnished by the Office add to the tediousness and expense of suits. To the public generally, the information contained in the mass of manuscript in the Patent Office is practically inaccessible, and people often pay royalties, in ignorance of their rights, or because it is cheaper than to attempt any search through the manuscripts of American patents. The public pay annually tens of thousands of dollars for infringement examinations, and some of the older manuscript volumes in the Office are nearly worn out by the repeated perusals. I think there is no tax which inventors and manufacturers would so cheerfully pay as that which should be imposed for the purpose of printing these documents. In consideration of these facts I would urgently recommend that the reproduction of these specifications be authorized at as early a day as possible, so that the work may be proceeded with as rapidly as the interests of the service demand and the facilities of the office permit. For this work an appropriation of $20,000 would prove ample for the next fiscal year. The sales of these copies, like those of the back drawings, would, at very moderate rates, soon reimburse the government for the outlay, so great is the demand for completed classes of patents.

TRANSFER OF PRINTING TO THE PATENT OFFICE.

I desire also to call attention to the present mode of printing specifications for patents. This, like other printing, is done at the Government Printing Office. But the conditions under which this printing is done differ from those attending other public printing: First, patents are issued each week, and the specifications, as soon as the fees are paid, must be at once printed. This makes the time required an important element in the performance of the work. Second, as the specification is a legal document, necessarily describing and defining by technical and exact terms the nature of the grant, something more is needed than ordinary proof-reading. It is necessary frequently to refer to the Examiners, and to consult with them upon the correction of errors. It has therefore been found indispensable, in order to save frequent reprinting, to subject the proof-sheets of specifications to another proof-reading in the Office after that of the Government Printing Office, so that the papers must be carried back and forth before the work of each week is completed. If the work could be done in the Office, under the immediate supervision of the Commissioner and Examiners, I am confident that it could be done more expeditiously, with considerable saving, and more accurately. The amount each week does not average above four hundred pages.

In connection with this, the Commissioner might, if permitted by law, also print copies of such of the old specifications heretofore referred to as should be ordered by the public, without additional expense, or with very slight additional expense, using for this purpose only from the ordinary appropriation for making manuscript copies. The regular price charged according to law, ten cents per folio, would pay the greater part of the cost of printing. Fifty additional copies might be printed, which would remain as a stock on hand for the supply of other demands and as a source of revenue.

In connection with this matter it may be well to consider the fees paid upon the issue of the patents. The final fee of $20 was established by law when the applicant furnished the copy of the drawing which was to be attached to his patent, and when the copy of the specification accompanying the patent was in manuscript, and only a single copy was made. As no discrimination could be exercised in the amount of fees charged to cover the expense of examination, whether the case were simple or complex and difficult, it was not deemed advisable to make any distinction in any respect, and the same fee was required in all cases. But under the present plan of printing the specifications and drawings, the government furnishes more for the same amount of money, and the difference in cost to the government between patents requiring a large number of printed pages of matter and numerous sheets of drawings and those requiring few is of great importance, and easy to estimate with reasonable accuracy. Patents are sometimes issued in which the whole fee paid by the applicant would not cover the cost of setting the type for printing the specification. Either the government loses in such cases, or parties taking out patents for simple inventions contribute to defray the expenses of the more complex. The inequality can be remedied, and exact justice done, by adding to the final fee required of the applicant the cost of printing his specification and drawings. In that case the final fee might be reduced. I estimate that a final fee of $15 and the cost of printing and photolithographing would reimburse the government. But if models should not be required, and inventors relieved of that expense, as suggested elsewhere, probably fuller illustration by drawing would be required, and it would be safe and just to retain the full fee. Whatever surplus there might be could be expended most profitably for inventors and the public severally in the printing, heretofore suggested, of the old specifications.

DIGEST OF PATENTS.

I renew a suggestion made by the Commissioner of Patents in 1873, relating to the publication of digests or abridgments of patented inventions such as are published by the British Government.

These abridgements contain in classified form brief summaries of the inventions patented in Great Britain.

Each volume contains some special class of inventions, arranged chronologically, and with subject-matter indexes. Any one desiring to be fully and accurately informed in relation to the patents granted in that country in all classes of inventions, may readily glean the information from the volume of abridgments, without which he would be compelled to search laboriously through the great mass of patents issued, now amounting to over 1,700 volumes.

The indexes are not full, but are sufficient to indicate the nature of the invention, and direct the inquirer to the volume and page where a full description and illustration may be found.

No such indexes have ever been made by this government. It has been attempted by private individuals in a few special classes. The completion of the whole work would require two or three years. It can be best done under the supervision of the Office, and in connection with the special Office work of examination. These indexes would enable one searching for special information to perform in a few moments the work of a day. They would effect a saving to the Office greater than their cost, and would find a ready sale at remunerative prices among manufacturers and inventors.

The need of them increases each year, with the increase of the number of patents, and if generally distributed they would serve more effectually than any other means to defeat those who, throughout the country, under worthless patents of narrow scope, impose upon the unwary and ill-advised. They might be distributed, in the same way as the Official Gazette, to public libraries in the Congressional districts, and would furnish an epitome of the entire record of the patents of the country, and ready information as to the state of the arts, accessible to all.

THE OFFICIAL GAZETTE.

The publication of the Official Gazette, a weekly rescript of the transactions of the Patent Office, was begun in 1872, taking the place of the old Patent Office Reports since that date. Its institution was made necessary by the growing demands of the manufacturing interests of the country for current information as to the operations of the Office, and its growing popularity is a sufficient guarantee of the wisdom of the policy which dictated the change.

The matter it contains is of special importance to manufacturers and all others interested in patent matters. The minimum price per annum for the Gazette now fixed by law is $5, a rate limited to clubs, five or more in number; single subscribers are charged $6, and at these rates the circulation is considerable, and constantly increasing. But it is my opinion that the price fixed is too great to meet the popular demand, and that at a less price its circulation would be very largely increased. Under the law Members of Congress are permitted to name eight public libraries in their States to which the Official Gazette shall be sent, and I believe that number could be increased with very great benefit to the public service. The information contained in the Gazette is national in its character, and its wide dissemination is beneficial to the country and to the business of the Office.

The Commissioner has none of the ordinary means used by publishers for bringing the Gazette to the public notice, and in my judgment the circulation of it might be largely increased, and the receipts not diminished, if authority were given to offer the publication to newsdealers at a rate considerably less than the minimum price of $5 when a large number of copies are ordered.

LIBRARY.

During the year there have been added to the library—

	Vols.
Specifications of patents of various countries	101
Scientific works, bound periodicals, &c	891
Duplicate English patents (unbound)	1,750
There were lost and destroyed by the fire	51
Books bound during the year	2,471
Total number of books in the library, not including duplicate English patents	24,000
Issued to Examiners and readers in the library, about	20,000
Number of scientific and other periodicals taken	253

One of the most important accessions during the year was a duplicate set of the specifications and drawings of English patents from 1852 to 1876, numbering 66,000, making about 1,750 large volumes, which were furnished by the liberality of the British Government, together with an additional set of abridgments down to the year 1866.

A complete duplicate set of the indexes of English patents has also been added, which will allow copies to go to the Examiners' rooms, and greatly facilitate the work of completing digests for the various classes down to date.

Some years since, the work of making a complete name and subject-matter index in English of all the French patents was begun, and only partially completed, owing to the want of clerical force in the library. This work has been continued, and is now nearly complete, including over thirty thousand French patents, all that have been published to date. The Belgian patents are to be indexed in the same manner, and this work should be extended to the Italian, Austrian, Norwegian, German, and other patents, and supplements to the indexes made each year. There are many scientific publications, containing a large number of volumes, that need to be indexed to become readily accessible to Examiners and the public. The absolute necessity for this becomes evident from the fact that nearly one-half of all the works in the library are in foreign languages.

Another important work has been the preparation of a catalogue of the library. Heretofore there has been only an incomplete card catalogue, which was exceedingly cumbrous and almost useless to those most desirous of consulting the works in the library. During the year there has been compiled by the librarian a complete catalogue or alphabetical index, both of authors and subject-matter, of all works in the library, making a royal octavo volume of over six hundred pages, the greater part of which is already printed. This is the first complete catalogue of the library ever published, and will add largely to the practical use of the library by simplifying the work of reference, for which this library was especially designed.

The importance of an extensive library in the work of this Office can scarcely be overestimated. By the provisions of law, the Examiners are required to judge of the novelty of an invention before a patent issues, and, for the purpose of examination, need a library kept up to date. Those of the public interested in patents have the same need.

Of the arts and sciences, as represented by the 24,000 volumes now in the library, but very few departments are in any sense complete, while upon some subjects there are scarcely any works that can be consulted. There is urgent need of an addition of at least ten thousand volumes to make the collection what it should be at the present time, for this class of information must be complete and come down to the latest date to be reliable and of value.

Scientific works are costly, and from the limited portion of the contingent fund allowed for the purpose it has not been possible to procure such works as were needed, and I would therefore renew the recommendations heretofore made, and would suggest that the sum of ten thousand dollars be specially appropriated out of the surplus receipts of Office fees, for the purchase of books for the library.

This bureau would not even then be placed on a par with some others in regard to its library. It is believed that a complete library, properly classified and catalogued, with subject-matter indexes of the more important works, would save thousands of dollars each year in the time required to make examinations; and the efforts made the past year toward this end are already bearing fruit, for the report of the librarian shows that the usefulness of the library has increased at least threefold this year, even with the present imperfect facilities.

Arrangements are in progress for securing complete sets of the patents issued by all nations from the earliest dates, and to increase the list of foreign exchanges with scientific, literary, and other societies. In this connection it is but proper to state that more room is greatly needed for the use of the library to properly carry on the work assigned it. The increase of English and French patents has entirely filled the space allowed them, and provision must be made for the additions of the coming year. The entire duplicate set of English patents remains in boxes, owing to want of space in which to arrange them.

In order to make the library more efficient, according to the plans before indicated, the selection of the persons employed has been made with special reference to their linguistic and other requisite attainments, and at the present time there is no one in the library who is not familiar with one or more foreign languages.

TRADE-MARKS AND LABELS.

This important branch of Office work is steadily increasing. One thousand four hundred and sixteen trade-marks and six hundred and thirty-two labels have been received for registration during the year. The receipts from this source for the past year have amounted to between thirty-eight and thirty-nine thousand dollars, about eight thousand dollars more than the receipts of last year.

The work of examination of trade-marks presented for registration, and the classification of the same, proceeds upon the same principle as examination and classification of applications for patents. The work has been divided into nearly eighty official classes, and the fac-similes arranged accordingly.

The importance of trade-marks to the commercial world is becoming more and more appreciated in this country, and the remedies under recent laws enacted for their protection in the United States courts are being frequently enforced.

LACK OF ROOM.

Recently, quite a large portion of the force engaged in tracing drawings and in making copies of the records have, by reason of the destruction of part of the building, necessarily been transferred to another building, greatly to the inconvenience of the Office. But this transfer has afforded no relief to the remaining portion of the force of this bureau. Halls and dark, ill-ventilated rooms continue to be occupied and crowded by the employés and by valuable public records. This evil has existed for years, and increases in extent with the accumulation of the records. The public business relating to the grant of patents suffers especially by lack of the room necessary to the examining corps for the arrangement of matter to be consulted in the examination of applications for patents.

APPOINTMENTS AND PROMOTIONS.

Since 1869 appointments and promotions in the examining corps of this Office have, with some interruption, been made by competitive examination. These examinations were resumed in April of last year. For promotions, the candidates have been examined almost exclusively in matters relating directly to the business of the Office in their particular line of duty, with a certain allowance in each case, determined before the examination for the general efficiency in such respects as could not be determined by the written examination.

Candidates for admission to the examining corps of the Patent Office have been examined for the lowest grade of the corps, and upon such mechanical subjects as come within the range of ordinary observation and attract the attention of persons having that natural interest in mechanism which accompanies an aptitude for such things. These examinations have also included some of the general principles of physics. The results of this system have been highly satisfactory. Men better fitted for the special work have been selected for appointment; the ablest, most diligent, and faithful men have been promoted; and, in addition to this, the effect, generally, upon the Office has been to stimulate industry, attention to business, and studious habits. These examinations have been conducted by gentlemen of higher grades in the Office, and without any expense to the government. As the examinations have been hitherto conducted at the department, an inconvenience has arisen to candidates from the necessity of their attendance at Washington for the purpose of an examination, which must result in many cases in disappointment. This might be remedied by holding an examination at stated periods in different parts of the country. I regard the system as of such importance in this Office as to justify some provision of law for conducting the examinations for the best interests of the government and the convenience of all concerned.

LOSSES BY THE RECENT FIRE.

The fire of September 24th completely destroyed all of the building occupied by the Patent Office above the second or principal story in the north and west wings.

The part destroyed included one-half of the model-rooms, containing 163 cases, mostly filled with patented models. Besides, there were several thousand models belonging to pending cases, some of which were allowed and awaiting payment of the final fee, and others rejected by the Examiners, but liable to be called up for further action within two years. In the roof-space above the west hall were stored some 13,000 models of finally rejected cases, which had been put there for the want of other available space for them in the building.

A room in the roof, one hundred feet long, at the junction of the south and west wings, had been recently fitted up as a store-room for photolithographic copies of drawings, which, when the fire broke out, were being moved from the ground floor in order that the room they occupied might be used for other purposes. The flames spread into this room, and a large number of these copies were destroyed by fire and water.

The roof over the east hall had to be cut into, and the space between it and the vaulted ceiling was deluged with water, which could only find its way out through the brick masonry into the room below. By these means a great number of valuable models, especially in the classes of sewing and textile machines, were materially damaged, the cases and all their contents were drenched with water, and the complicated mechanism of iron and steel coated with rust.

It was at first estimated that the models in the north and west halls were entirely lost. On a careful survey of the burned halls, after removal of the heavy roof-irons and other material of the building, it was believed practicable to preserve and restore a considerable number of the models which at first had been thought totally destroyed. Many of them were entirely of metal, and heavy enough to resist any but furnace heat, and others, of which wooden parts were consumed, were apparently preserved in sufficiently good condition for ordinary office purposes. In clearing the space for the temporary roof, the dust and cinders were therefore carefully examined, and every scrap of a model, however valueless in appearance, was retained. Many considerations appeared to demand that, so far as possible, these models should be preserved. Apart from their intrinsic value as elaborate and costly productions of mechanic art, and as containing the actual history of the inventions, they were a part of the record-evidence upon which large amounts of capital had been invested. Hence it seems that if any of these models could be preserved it would be inexcusable to permit them to be lost. It was estimated that not far from ten thousand of them could be preserved.

Congress having appropriated the sum of $45,000 to be expended for this purpose, I have begun the work, and am happy to report that, so far as I can judge from the indications up to date, much more can be accomplished than I before deemed possible.

The number of models I shall be able to restore will probably be greater than I estimated, and the expense per model less.

The models in the east hall, which were damaged by water, seemed to demand the first attention. The inventions they represented were of great value, their parts were intricate, often minute, and the inevitable injury to them from rust was scarcely less than a fire would have occasioned. I therefore, immediately on the partial restoration of order in the Office, took steps to arrest the damage to these models by having them taken apart, oiled, and freed from rust, and have, up to this time, kept constantly engaged on this work such force as the means at my disposal have from time to time permitted. This part of the work will be shortly completed, and probably 5,000 models of the most valuable description preserved in perfect order.

The damage to photolithograph copies was at first estimated at 40,000 sets of 150 sheets each, requiring for their reproduction about $60,000. After clearing away, however, the portion rendered absolutely worthless by fire and water, I caused a careful examination to be made of the remainder, and found that a large proportion of them, having been packed in solid masses, had substantially withstood the fire, and might be made available for use and sale by trimming the charred edges. The result has been that I am able to reduce my original estimate for restoring these copies one-half, or approximately to $30,000.

Thirty patented drawings in the class of wood-working were in the hands of copyists working in the model-room, and were burned. This loss is particularly serious, as the models were also destroyed, and there is no means of replacing the drawings except from the original letters patent to which copies were attached. This may, in time, be accomplished.

Eleven volumes of drawings of English patents were also destroyed. It gives me special pleasure to state that this loss being made known to the Commissioners of Patents at London, they at once directed duplicate copies of these drawings to be sent to this Office without charge.

Of minor losses to books, furniture, and fixtures, there were many, none of them of special significance in themselves, but in the aggregate amounting to thousands of dollars. The water thrown on the fire poured in torrents through the ceilings, flooding all the rooms on the main floor in the north hall, and it was only by the most active exertions of a large force, day and night, that it was kept from deluging the floor below. The same experience was repeated a few days afterward by the occurrence of a severe rain-storm before the temporary roof was erected.

These successive disasters were necessarily discouraging, and, to a certain extent, demoralizing; but after each there was little delay in the restoration of order and resumption of work. The greatest embarrassment was occasioned by the want of room, so large a portion of the building being rendered unfit for use, and the General Land Office being compelled to trespass upon the already limited space devoted to this bureau. But I am pleased to report that in the midst of these embarrassments and great apparent confusion, business proceeded almost as usual, and the weekly issues indicate no interruption. The records show only one day in which no patents were allowed, and that was shown to have occurred only because the clerk to whom allowed cases were sent, having been driven from his desk and room by the flood, had no place to receive them from the Examiners.

AMENDMENTS OF THE LAW.

Prior to the fire, models of patented machines had been accumulating in the Office since 1836—for some

years at a rate of from twelve to fifteen thousand per annum. Some of these occupy fully a cubic foot of space, though many are smaller. Though the number of rejected models had been greatly diminished by occasional distribution to scientific institutions, at the time of the fire there were about thirteen thousand (13,000) stored under the roof. Patented models had filled almost every available space in the fourth story of the building. They were useful to the public for the purpose of examination by persons desiring to be advised as to the novelty of inventions made by themselves or their clients. Duplicates were sometimes ordered to be used as evidence in court, and they were frequently referred to in applications for reissue. But it has become a serious question whether these advantages, added to the somewhat sentimental interest in the collection as a distinctively American display, were sufficient to justify the great cost on the part of inventors in furnishing these models, and on the part of the government in storing and exhibiting them. I am of the opinion that, under certain conditions, it will be better to dispense with models in applications for patents. They form no part of the patent when issued. The law makes it essential to the validity of a patent that the specification and drawing thereof shall disclose fully the invention to those skilled in the art to which it pertains.

Examinations can be made without models, and, in my judgment, with greater certainty of fullness and accuracy from the drawings; since, without the model, the Examiner, relying wholly upon the drawings, would detect any imperfection. It will be necessary only that provision be made requiring models in cases where the capability of the machine to operate is called in question, or where the Examiner is in doubt as to the sufficiency of the drawing, or where models may be necessary for ready illustration on appeals, or in interference cases.

The omission of models will, as I have intimated, relieve the inventor of a large part of the expense attending applications for patents, and will tend, on the whole, to make the drawings and specifications attached to patents more full, clear, and explicit. The drawings in nearly all the patented cases having been reproduced, the preliminary and infringement examinations, hitherto made on the models, can now be made by means of copies of the drawings, of which I have already arranged one set to supply the place of the models destroyed. Now that the models which remain cover but half of the ground, it seems an opportune time to change the system, if such change is at all desirable.

In connection with this I also suggest that provision be made for the preservation of such models as shall be capable of operation, and be deemed valuable for the purpose of illustrating practical working machines, used anywhere in the country, and for the reception and custody of specimens of manufacture and working models of such operating machinery as manufacturers or inventors may desire to place on exhibition. A collection thus made up of working models, confined to inventions actually in use, would be of value as illustrating the state of the arts throughout the country, and would be unincumbered by the great mass of useless material accumulated under the old model system. It would require much less space for many years than that occupied by the models recently destroyed.

Much of the complaint against the patent system of this country has arisen out of the reissue of old patents with expanded claims. Under the law, and in conformity with the decisions of the courts, as understood by the Office, it has been the practice hitherto to allow the introduction, upon reissue, of matter shown in the model, but not contained in the drawing or specification of the original patent. As the model constitutes no part of the patent, is not referred to therein, and not brought to the notice of the public, the reissue of a patent based upon matter contained in the model alone may well operate as a surprise to the public. It gives opportunity for fraud, because it is impossible to keep the models in such strict and faithful custody as not to afford sometimes an occasion for changing a model, either by adding or taking away some part to materially change the invention, very substantial difference being sometimes made by a very slight change. I recommend, therefore, a modification of the law restricting the applicant for reissue to matters contained in the specification and drawing, without any reference to the model.

In this connection I refer, also, to another provision in the present law, contained in the latter part of section 4916 Revised Statutes, which has been understood by this Office to provide for the amendment of certain classes of cases upon reissue by the introduction of new matter on proof outside of the Office record. Such proof can only be furnished by voluntary affidavits. Although the repeal of this provision might, in some cases, work hardship, the opportunity for fraud is so great, and the temptation so strong, that it seems wiser and for the public interest that the section should be modified in this respect.

There is another class of cases, not infrequent, in which honest mistakes occur, which may be corrected without injury to the public, but for the correction of which no provision now exists. I refer to cases where parties, through ignorance of the law, have taken out patents as joint inventors, where one or more of the parties had, in fact, only the interest of an assignee. The law authorizing reissues does not touch these cases, and it has been held by the Department that the correction cannot be made as a clerical error. It is necessary only to authorize the Commissioner to receive such patents, with proper affidavits of the parties interested, and to make the correction and a proper certificate thereof.

It is perhaps unavoidable, even under our system, which provides for an examination as to patentability, that patents of little or no value, and for unimportant improvements, should be very frequently granted. Many of these patents are used more to retard the progress of the arts than to advance them, and in such ways as to tend rather to bring the patent system into disrepute. For illustration, patents are often granted for inventions more or less crude, for machines capable of operation mechanically, but not capable of profitable operation, and not valuable commercially, or for processes which, for like reason, fail to become of practical value. These patents sometimes lie dormant until, in the progress of the arts and by the efforts of more practically successful or ingenious inventors, the goal is

ultimately reached, and inventions are perfected and made practically useful, in which, however, are embodied the germs found in some of these old patents.

One of the greatest hardships, and the source of much complaint, has been the reissue of such old patents with claims covering machines subsequently invented and practically the first to operate successfully. To such an extent has this been carried, that when a man had really made a valuable invention, it was necessary for him to examine the records of the Office, and ascertain what old patents could be found which might be reissued to cover his invention; and it has been a matter of prudence to secure such patents before investing in the manufacture of an invention liable to be dominated in that way.

Further than this, there are patents granted for improvements more or less trivial, differing in comparatively small particulars from machines or articles preceding them. It is difficult to prevent the issue of such patents, partly by reason of the urgency of the applicant, very largely by reason of the persistency and effort of attorneys whose fees in many cases are made to depend upon their success in obtaining the patent, and partly because it is very difficult for the Office to undertake to determine the practical value of an improvement. That which seems but a trivial change may amount in practice to a very important and valuable improvement. Since the grant of such patents cannot always be avoided, the question arises whether their duration may not be abridged, and for this purpose some process of natural selection be applied to the patents issued by the government. It has, therefore, been thought desirable to require, at certain periods in the life-time of a patent, the payment of fees as a necessary condition to the continuation of the life of the patent. Such a provision would, in my judgment, tend to remove useless and frivolous patents, without imposing any serious burden upon those that prove meritorious.

For the convenience of the Office and the public, I suggest an amendment to section 4885 Revised Statutes. The existing law requires the payment of the final fee within six months after notice of allowance of the application. The conduct of business in the Office requires that the issue of patents for each week should be closed upon a certain day. If the final fee is paid, as is often the case, upon the last day of the six months, it is impossible to give the patent the date of the preceding issue, that having been closed and the papers all sent to the printer. As the day of closing the issue necessarily precedes by two or three days the date given to the weekly issue of patents, which is the day of signing those patents, the only practicable day of issue in such case does not come within the six months prescribed by law, and the Office is compelled to resort to the fiction of sending a new circular, with a new date of allowance. Further, the patent is dated and begins its term of seventeen years on the day on which it is signed, and the Commissioner is compelled, under the present arrangement, to sign these patents in blank, and afterward print the specification and drawing, make up the patent, and affix the seal thereto, which, for the whole issue, requires about two weeks after the date of the patent. It seems desirable to have the law so changed in relation to the payment of the fees that the papers can be prepared and ready for delivery on the day when the term of the patent begins.

The last clause of section 4887 Revised Statutes requires that every patent granted for an invention which has been previously patented in a foreign country shall be so limited as to expire at the same time with the foreign patent. I know of no good reason for this restriction, either in the case of alien or citizen inventors. For citizens of this country, it simply amounts to a restriction upon the right which they would otherwise have to take out patents for their inventions in foreign countries. It is often desirable to take out a foreign patent first. The prior issue of the American patent requires extraordinary diligence on the part of the inventor (often unable at once to bear the expense of taking out foreign patents) in order to prevent unscrupulous parties from taking the invention abroad and patenting it (as they may without making the oath of invention), or to prevent the introduction into foreign countries of the publication of the invention, which in some cases would bar the issue of the foreign patent. In order to prevent the enjoyment by a foreign inventor of the patent granted him abroad during any considerable part of the life-time thereof, and the subsequent taking out of the patent for the same invention in this country, it might be provided that the application should be made in this country within two years or less time after the date of the foreign patent.

I would also suggest that section 4897 Revised Statutes be amended in order to put applications forfeited for non-payment of the final fee upon the same basis as applications abandoned by reason of failure to act thereon within two years after action by the Office. As the law now stands, a discrimination is made against cases passed for issue, for matter decided to be patentable, which is not made against applications not so decided upon, but in the same manner neglected by the parties thereto.

I suggest that the law relating to declaration of interferences in the Patent Office (section 4904 Revised Statutes) be amended so as to provide that after the final decision in the Office between parties to an interference, the application of the successful party shall not be put in interference with any application filed after the closing of the testimony taken on behalf of the successful party, and permitting only an interference to subsequent parties with the patent of the party prevailing in the first interference. It sometimes happens that a party, defeated in the first interference, comes into the Office, before the patent can issue to his opponent, with a new application signed and sworn to by some third party and assigned to himself. Such circumstances give rise to a very strong suspicion that the second interference is substantially a prolongation of the first.

In the second interference, the subsequent party has the advantage of knowledge of his opponent's case; and it is asserted in some of these cases, with probability of truth, that the proceeding is simply for the purpose of delaying a patent, while the parties defeated in the interference are enjoying the fruits of the invention.

The Office is in receipt of considerable revenue from the sale of copies. The customary price charged for manuscript copies is ten cents per hundred words; for

printed copies of specifications, twenty-five cents per single copy, and ten cents each for twenty or more. For certified manuscript copies the price is the same as for uncertified; but for certified printed copies the price is the same as for manuscript copies. The latter price is exorbitant; and the price for printed copies is greater by far than the cost of printing; but when only a few are ordered the price charged does not exceed the actual cost, taking into consideration the attendance necessary for the prompt delivery of such copies. Cases arise in which parties desire complete sets of classes, including several hundreds or several thousands of copies, and in such cases the price is excessive. I recommend that section 493 Revised Statutes be amended, in order that it may be more equitable in these respects.

Specific amendments to the law have already been suggested in accordance with these recommendations, which are embodied in a bill now before the Senate Committee on Patents.

In addition to the matters already suggested and embodied in the bill, there is another which has received considerable thought from those interested in patents, and to which I desire to call attention. Under the present organization of the Office there are twenty-two Principal Examiners issuing patents. Practically, there is no review of applications which have received their favorable action. These Examiners are frequently changing, and are not always in harmony as to their views of the law or their understanding of what is patentable thereunder. From their adverse decisions appeal may be taken to the Board of Examiners-in-Chief. This board, having authority to reverse the Examiner's action, practically determines more than the Commissioner the general policy of the Office in the issue of patents. If they are inclined to issue patents for unimportant matters, they overrule the Examiners, and their decisions directly and as precedents govern the corps.

The board, which consists of three members, is also, from causes which affect the Office generally, subject to change. Since its establishment in 1861 there have been fifteen different members. Under such conditions it must appear inevitable that there could not have been uniformity or the constant exercise of the wisest discretion in the granting of patents. The whole tendency has been toward an excessive issue of patents, and there is need of constant supervision.

The official sanction and certificate of novelty often give a patent value in the eyes of the applicant without much regard to what he is actually entitled to claim, and a very large number of cases are urged before the Office by attorneys whose fees depend upon the grant of the patent.

Under the present organization of the Office there is no hope of greater uniformity and no possibility of more careful supervision. It was proposed some years ago to accomplish this by grouping the classes, so as to place the granting of patents in fewer hands; but the scheme was never put into practice. It is impossible for the Commissioner to supervise personally one in a hundred of the patents issued. His duties are too diverse and numerous, and should rather be abridged. In fact, the business has outgrown the organization. Since the reorganization, in 1836, when the offices of Commissioner and Examiner were created, the number of Examiners has increased from one to eighty-eight, the total number of employés from seven to above four hundred, and the number of applications from about six hundred and fifty to above twenty thousand per annum. In 1837 the cash receipts were twenty-nine thousand two hundred and eighty-nine dollars and eight cents, and in 1876 they were seven hundred and fifty-seven thousand nine hundred and eighty-seven dollars and sixty-five cents. With this increase the business has naturally and inevitably become more complicated. This increase has added immensely to the executive duties of the Commissioner, and rendered them such as to need all his time and care. But in addition to these duties he has those of the appellate tribunal next above the Examiners-in-Chief; and although very few *ex parte* cases reach him, there are many appeals in interference cases, which often require the examination of a large amount of testimony, and the decision of essentially the same questions as those which arise in infringement suits in the United States Courts. The duties of the Commissioner are not only too many, but they are incompatible. The watchfulness, care, and constant supervision required of the executive officer are inconsistent with the exercise of the judicial qualities necessary for the consideration of questions brought up by appeal. I believe that the Commissioner should be relieved of these judicial duties, and that they, as well as those which now devolve on the board, should be confided to a more permanent tribunal than either the board or Commissioner.

Such a tribunal has been suggested, of the nature of a patent court, to be established in connection with the Office, and to be composed of three members, appointed as other judges of the United States courts are appointed. To such a court all appeals from the adverse decisions of the Examiners might be directly taken. This would save one appeal, would relieve the Commissioner of all judicial duties, and would bring into direct connection with the Office a permanent judicial head. The Commissioner might then, with the other assistance already provided by law, inspect the patents which he signs, and refer to the court for revision such as might seem to him improper to issue.

I know of no plan which promises better than this to correct the evils arising out of granting patents for things which ought not to be patented. The law of 1836 provided for an examination as to novelty in order to guard against "the granting of patents for everything indiscriminately." The amendments now proposed are in the same direction, and contemplate more careful and uniform examination and complete supervision in allowing patents.

The evils complained of under the present system are not occasioned by patents granted to true and worthy inventors, but by worthless patents. They are not essential to the system, but incidental in its rapid growth, and trifling in comparison with the benefits bestowed.

These benefits have outrun the anticipations of the founders of the law, and, indeed, cannot be measured. In his report accompanying the bill which became the law of 1836, the chairman of the Senate Committee on Patents then said: "Important and interesting as the Patent Office is now considered, it is believed that, under such new organization as is contemplated by the bill presented herewith, it will contribute largely to the great interests of the country and bear no small

part in elevating our national character. American ingenuity has obtained much consideration on the other side of the Atlantic. Even the manufacturers of England are not a little indebted to it for some of their most valuable improvements." This was before the invention of the reaper, before the sewing-machine, the telegraph, the various improvements in fire-arms, and numbers of other American inventions which have been carried into Europe and over so large a part of the civilized world. The mind cannot grasp, no data can be collected to state, the vast results of American invention since 1836. Of the agricultural implements alone the single class of harvesters represents the working force of an immense army. Without these the grain-fields of the West could not be reaped. Indeed, in every art inventors have spurred manufacturers to the adoption of improvements which have made almost every useful thing in civilized life cheaper or better, and which have enabled us to enter into successful competition with older manufacturing countries in the markets of the world. The list of our exported manufactures is already long and is yearly increasing.

It cannot be doubted, I think, that this marvelons growth and excellence in inventions are due to the stimulus given by the protection afforded by the law. There are few valuable inventions which have not been the result of long study, and which have not required the expenditure of time and capital to perfect and bring into use—expenditures not to be expected unless there be held out the hope of reward.

The records of this Office, as well as the history of our manufactures, show the immense labors and achievements of inventors during the last half century. But the end in no department is yet reached. The fields of invention are exhaustless, and under protection wisely given the future will be richer in inventions than the past.

Respectfully submitted.

ELLIS SPEAR, *Commissioner.*

WASHINGTON, D. C., *January* 29, 1878.

ALPHABETICAL LIST

OF

PATENTEES FOR THE YEAR 1877.

[Claims and drawings of Designs, Extensions, and Disclaimers are not carried into the Monthly Volumes or the Gazette.]
[Trade-marks are in a separate index.]

Number.	Name, residence, and invention.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
196,616	Abbott, Adrian O., Adrian, Mich. Corn-planter	Oct. 30, 1877	981	286	12	735
196,065	Abbott, Americus M., Stockton, Cal. Windmill	Oct. 16, 1877	397	115	12	633
	Abbott, Arthur A. (*See* Francisco, Henry) ... (Reissue.)					
189,675	Abbott, Arthur A., Chicago, Ill. Sleigh-knee	Apr. 17, 1877	679	210	11	663
197,509	Abbott, Arthur V., Brooklyn, N. Y. Rod-coupling	Mar. 27, 1877	833	248, 249	12	906
	Abbott, Edwin O. (*See* Beaver & Abbott.)					
	Abbott, Essex S. (*See* Addy, Charles J., assignor.)					
193,312	Abbott, Henry, Newark, N. J. Lever winding and setting attachment for watches	July 24, 1877	804	247	12	145
	Abbott, John D. (*See* Moss & Abbott.)					
197,713	Abbott, Nathan B., assignor to self and J. P. Crawford, Brooklyn, N. Y. Steam-roller for composition pavements	Dec. 4, 1877	5	2	12	947
198,260	Abbott, Nathan B., assignor of one-half interest to J. P. Crawford. Composition for concrete pavements	Dec. 18, 1877	592		12	1046
	Abbott Quicksilver Mining Company. (*See* Aldersley, William K., assignor.)					
196,737	Abbott, Revvel E., Akron, Ohio. Curtain roller and bracket	Nov. 6, 1877	1	1	12	761
188,722	Abbott, Richard A., and M. W. Parrish, Jackson, Mich. Key for locks	Mar. 27, 1877	773	237	11	509
197,078	Abel, Jacob W., Buffalo, N. Y. Ironing-machine	Nov. 13, 1877	365	107	12	820
187,696	Abel, William H., Laconia, N. H. Knitting-machine	Feb. 27, 1877	793	247, 248	11	337
	Abell, Pratt. (*See* Gifford & Abell.)					
	Abercrombie, Otis P. (*See* Willard, George, assignor.)					
193,311	Aborn, James, assignor to H. G. Smith, Cranston, R. I. Combined shutter worker and fastener	July 24, 1877	803	247	12	145
198,556	Abraham, Jacob, Silver City, N. Mex. Tail-piece for guitars	Dec. 25, 1877	879	268	12	1097
187,341	Abrams, Addison W., Springfield, Mass. Tube-brush	Feb. 13, 1877	424	133	11	272
	Abry, Charles L. (*See* Richoux, Louis, assignor.)					
189,166	Absterdam, John, New York, N. Y. Process and apparatus for manufacturing illuminating gas	Apr. 3, 1877	132	47	11	577
	Achaner, Herman F., *et al.* (*See* Bowden, John B., assignor.)					
198,261	Ackerman, Michael, Steamboat Rock, Iowa. Self dropper and marker for corn-planters	Dec. 18, 1877	592	179	12	1046
	Acuff, James H. (*See* Simmons, John P., assignor.)					
187,697	Adair, James, assignor to self and C. C. Hussey, Allegheny, Penn. Skate	Feb. 27, 1877	798	248	11	337
192,046	Adair, James, Allegheny County, Pa. Fire-place	June 19, 1877	553	169	11	1067
192,211	Adair, James H., Lynville, Ky. Seed-planter	June 19, 1877	716	219	11	1088
	Adams & Co. (*See* Jordan & Mequillet, assignors.)					
	Adams & Co., F. F. (*See* Lovell, Meloine W., assignor.)					
	Adams, Alexander. (*See* Silver, Frank, assignor.)					
189,832	Adams, Alex. C., Cambridge, Mass. Calendar	Apr. 24, 1877	859	263	11	695
189,076	Adams, Allston, and A. Bott, Albany, N. Y. Ornamental card-board	Apr. 3, 1877	59	22	11	567
190,997	Same.....Ornamenting card-board	May 22, 1877	928		11	891
	Adams, Alonzo P. (*See* Victory, Charles H., assignor.)					
195,470	Adams, Amasa P., West Warren, Mass. Cop-building mechanism for spinning-machines	Sept. 25, 1877	748	221	12	530
	Adams, Benjamin T., *et al.* (*See* Miller, Cassius M., assignor.)					
189,985	Adams, Charles M., Ashland, Mass. Fuel-composition	Apr. 24, 1877	1006	11	11	714
186,513	Adams, Dummer J., Kittery, Me. Counter-sink	Jan. 23, 1877	715	220	11	129, 130
195,553	Adams, Edwin G., Cohoes, N. Y. Vehicle-propeller	Sept. 25, 1877	823	244	12	541
186,760	Adams, George S., Philadelphia, Pa. Hinged splint	Jan. 30, 1877	902	279	11	164
	Adams, George W., *et al.* (*See* Eaton, James W., assignor.)					
	Adams, Henry A., *et al.* (*See* Shogren, Andrew, assignor.)					
191,217	Adams, Henry A., Sandwich, Ill. Harvester-rel	May 29, 1877	1157	347	11	931
191,631	Same same	June 5, 1877	112	34, 35	11	991
191,632	Same same	June 5, 1877	113	35	11	991
196,066	Adams, Henry B., New York, N. Y. Fluting-machine	Oct. 16, 1877	398	115	12	633
	Adams, Henry W. (*See* Ziegler, John Q. A., assignor.)					
187,243	Adams, Henry W., jr., assignor to self and J. Q. A. Ziegler, Philadelphia, Pa. Furnace for brick-kilns	Feb. 13, 1877	324	104, 105	11	258, 259
192,630	Adams, Henry W., assignor of one-half interest to J. Q. A. Ziegler, Philadelphia, Pa. Hot-blast grate-bar	July 3, 1877	75	22, 23	12	22
194,024	Same.....Preparing molded forms of clay and setting them in kilns for burning.	Aug. 14, 1877	245	73	12	275
196,105	Same.....Air-blast kiln for burning bricks, tiles, lime, &c	Oct. 16, 1877	442	129, 130	12	639
197,077	Adams, Henry W., Philadelphia, Pa. Apparatus for manufacture of illuminating gas from coal and oil	Nov. 13, 1877	361	106	12	820
196,617	Adams, Jesse, Lewisville, Ind., assignor of one-half interest to J. S. Smear, Waveland, Ind. Soil-pulverizer	Oct. 30, 1877	982	286	12	735
	Adams, John F. (*See* Brower & Adams.)					
	Adams, J. Phelps, *et al.* (*See* Shogren, Andrew, assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
194,982	Adams, John R., Oakland, Cal. Water-closet	Sept. 11, 1877	238	72	12	440
185,813	Adams, John S., Elgin, Ill. Pump	Jan. 2, 1877	1	1	11	9
187,078	Same.....Tower for windmills	Feb. 6, 1877	153	51	11	223
195,322	Same.....Governor for regulating the speed of machinery	Sept. 18, 1877	593	174	12	499
197,809	Same.....Double-acting pump	Dec. 4, 1877	101	31, 32	12	960
105,782	Adams, John Z., Kalamazoo, Mich. Pump and well	Oct. 2, 1877	87	26	12	574
7 939	Adams, Lawson, Omaha, Nebr. Lightning-rod (Reissue)	Nov. 6, 1877	239	72	12	794
193,469	Same.....same	July 24, 1877	951	289	12	166
191,294	Adams, Luther I., East Templeton, Mass. Nursery-chair	May 29, 1877	1227	369	11	940
195,201	Adams, Manning J., Saint Paul, Minn., assignor of one-half interest to National Tube Works Company, McKeesport, Pa. Flume for establishing permanent channels in rivers, &c	Sept. 18, 1877	475	141	12	483
188,764	Adams, S. Jarvis, Pittsburg, Pa. Pump-handle and sucker-rod joint	Mar. 27, 1877	813	249	11	514
195,554	Adams, Theodore J., Whitehall, N. Y. Feather-renovator	Sept. 25, 1877	824	244, 245	12	541
187,501	Adams, Thomas E., North Evans, N. Y. Horse-power	Feb. 20, 1877	598	185	11	301
192,631	Same.....same	July 3, 1877	77	23	12	22
189,676	Adams, Thomas F., assignor to Peerless Brick Company, Philadelphia, Pa. Brick	Apr. 17, 1877	680	210	11	663
192,106	Adamson, Alexander, Washington, D. C. Shoulder-brace	June 19, 1877	607	185	11	1074
198,235	Adamson, Charles E., Humboldt, Nebr. Wagon-rack	Dec. 18, 1877	554	170	12	1041
188,088	Adamson, William, Philadelphia, Pa. Treating bones for glue-stock	Mar. 6, 1877	122	36	11	397
191,633	Same.....Extracting hydrocarbons from substances which have been treated therewith	June 5, 1877	114	35	11	991
195,969	Same.....Obtaining fiber from cotton-seed	Oct. 9, 1877	292		12	610
192,402	Adancourt, Clinton L., Lansingburg, N. Y. Bench-plane	June 26, 1877	944	282	11	1129
	Adar, Milton. (*See* Bowers & Adar.)					
196,104	Addison, Thomas, Elizabeth, N. J. Pipe and hose coupling	Oct. 16, 1877	441	129	12	639
196,283	Addy, Charles J., Boston, Mass. Machine for burnishing the edges of boots and shoes	Oct. 23, 1877	637	185	12	675
197,306	Addy, Charles J., assignor of one-half interest to E. S. Abbott, Boston, Mass. Sole-edge trimming-machine for boots and shoes	Nov. 20, 1877	608	180	12	864
198,064	Adkins, Lawson H., Americus, Ga. Animal-trap	Dec. 11, 1877	358	111	12	1007
190,728	Adlam, Samuel, jr., assignor to J. A. Caldwell, Boston, Mass. Strap or device for securing hose to couplings	May 15, 1877	657	195	11	847
196,738	Adler, Henry, Pittsburg, Pa. Fender for fire-places	Nov. 6, 1877	2	1	12	761
	Adler, Max. (*See* Bray, Morris P., assignor.)					
	Adriance, Benjamin. (*See* Westcott, Adriance & Miner.)					
188,562	Adriance, Walter, Poughkeepsie, N. Y. Clutch shaft-gearing	Mar. 20, 1877	607	188	11	478
190,531	Same.....Horse hay-rake	May 8, 1877	432	126	11	811
193,205	Same.....same	July 17, 1877	663	203	12	118
194,211	Same.....Device for transmitting motion	Aug. 14, 1877	439	133	12	300
195,783	Same.....Horse hay-rake	Oct. 2, 1877	87	26	12	574
198,328	Same.....same	Dec. 18, 1877	645	197	12	1055
	Adsit, John O., *et al.* (*See* Graham, Miles G., assignor.)					
188,834	Aeckerle, Jacob, New York, N. Y. Belt-shifter for hoisting-elevators	Mar. 27, 1877	895	272	11	525
194,508	Aenis, John, Cleveland, Ohio. Vent-plug for beer-barrels	Aug. 28, 1877	763	227	12	359
189,592	Agnew, George, Titusville, N. J. Pencil-sharpener	Apr. 17, 1877	600	185	11	653
	Agnew, J. B. (*See* Smyser, George M., assignor.)					
193,907	Agnew, John, assignor of one-half interest to W. W. Sommerville, Pittsburg, Pa. Bellows	Aug. 7, 1877	106	34	12	249
194,800	Ahl, David, Newville, Pa. Manufacturing felted surgeon's splints	Sept 4, 1877	44	14, 15	12	407
	Ahlenius, Adam O. (*See* Wilson & Ahlenius.)					
	Same (*See* Wilson, Alexander, assignor.)					
196,411	Ahrbeckter, Henry C., London, England. Rotary water-meter	Oct. 23, 1877	763	220	12	693
189,414	Ahrens, Christopher, Cincinnati, Ohio. Steam-pump	Apr. 10, 1877	408	129	11	620
196,176	Ahrens, William H, San Luis Obispo, Cal. Cheese-press	Oct. 16, 1877	517	150	12	649
195,876	Aiken, Jones B., Franklin, N. H. Ticket-punch	Oct. 9, 1877	193	55	12	597
197,237	Aiken, Walter, Franklin, N. H. Yarn-guide and needle-bar presser for knitting-machines	Nov. 20, 1877	543	160	12	854
195,202	Aiken, Will C., Cleveland, Ohio. Clothes-drying rack	Sept. 18, 1877	476	141	12	483
192,556	Aiken, William, and W. W. Drummond, Louisville, Ky. Core-box	July 3, 1877	1	1	12	13
195,070	Same.....Sand-molding machine for metal castings	Sept. 11, 1877	325	98	12	453
195,071	Same.....Art of molding sand for making castings	Sept. 11, 1877	327	99	12	453
195,784	Same.....Molding apparatus	Oct. 2, 1877	89	26	12	574
195,785	Same Sand-molding machine	Oct. 2, 1877	90	26	12	574
195,786	Same.....same	Oct. 2, 1877	91	27	12	574
	Ainscough, Thomas G. (*See* Watkins, Arthur, assignor.)					
193,206	Ainsworth, John H., Philadelphia, Pa. Railway-switch	July 17, 1877	663	203	12	118
196,284	Same.....same	Oct. 23, 1877	638	185	12	675
198,262	Aitken, Andrew, assignor to self and J. R. Nelson, Wells River, Vt. Ironing-table	Dec. 18, 1877	594	179	12	1046
197,712	Aitken, Henry, Falkirk, North Britain. Manufacturing illuminating-gas	Dec. 4, 1877	1	1, 2	12	947
198,725	Aitken, Henry, Falkirk, and W. Young, Clippens, North Britain. Manufacturing illuminating-gas	Dec. 25, 1877	1044	318, 319	12	1122
197,076	Aitken, Robert W., assignor to R. and G. H. Dunbar, Buffalo, N. Y. Balance-valve	Nov. 13, 1877	360	106	12	820
	Akin, Daniel W. (*See* Dustan, John H., assignor.)					
186,223	Akins, John F., Bridgeton, Pa. Bee-hive	Jan. 16, 1877	413	126	11	79
	Akins, Thomas E. (*See* Weatherhead, Davis L., assignor.)					
195,243	Albaum, Frank, and J. Eisenla, Brooklyn, N. Y. Milk-can	Sept. 18, 1877	522	152	12	489
	Albee, Harry C. (*See* Dicey, Elmer C., assignor.)					
194,569	Allerger, John L., Buffalo, N. Y. Preserving flesh	Aug. 28, 1877	817	243	12	366
189,677	Albert, Charles F., Philadelphia, Pa. Violin for practice	Apr. 17, 1877	680	210	11	663
	Albert, W. L., *et al.* (*See* Pepper & Gephart, assignors.)					
187,577	Albertson, Benjamin, Union, Iowa. Car-coupling	Feb. 20, 1877	663	206	11	310
194,320	Alberty, Myron H., Cherokee, Kans. Middlings-separator	Aug. 21, 1877	566	175	12	323
195,244	Albin, Isaac D., sr., Chilhowee, Mo. Horse-power	Sept. 18, 1877	523	152	12	489
192,632	Albrecht, Hermann, Philadelphia, Pa. Clamping device for fluting-machines	July 3, 1877	78	23	12	23
190,532	Albright, Arbanes S., Cranesville, W. Va. Car-coupling	May 8, 1877	433	127	11	811
	Albright, C., *et al.* (*See* Stroh, Abraham, assignor.)					
	Albright, George W. (*See* Albright, Spencer D. and G. W.)					
197,075	Albright, James A., assignor of one-half interest to J. H. Holman, Fayetteville, Tenn. Expansion rock-drill	Nov. 13, 1877	359	106	12	819
193,746	Albright, Spencer D. and G. W., Stanton, Mich. Machine for making and sapping shingle-bolts	July 31, 1877	1242	373	12	216

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
186,093	Alden, Charles, Newburg, N. Y. Process of treating fish	Jan. 9, 1877	282		11	54
	Alden, Charles E. (*See* Buist & Alden.)					
	Alden, Dana K. (*See* White, Hiram J., assignor.)					
185,882	Aldersley, William R., assignor to Abbott Quicksilver Mining Company, Colusa, Cal. Ore-roasting furnace	Jan. 2, 1877	66	21	11	17
197,003	Aldom, Edward, Brooklyn, N. Y., assignor to M. Kamak, New York, N. Y. Domino	Nov. 13, 1877	284	84	12	808
185,847	Aldrich, Aaron, Pascoag, R. I. Fastening for bolsters, &c	Jan. 2, 1877	34	10	11	13
188,326	Aldrich, Hosea I., New Sharon, Iowa. Feed-cooker	Mar. 13, 1877	368	115	11	436
192,669	Aldrich, Robert, Millville, Mass, Machine for making picker-teeth	July 3, 1877	126	34	12	29
195,692	Aldrich, Wales, assignor of one-half interest to Dayton Machine Company, Dayton, Ohio. Hand-drill	Oct. 2, 1877	1	1	12	561
	Aldridge, Frank C., *et al.* (*See* Aldridge, Hiram, assignor.)					
186,188	Aldridge, Hiram, assignor of one-half interest to M. Hillard, Saint Louis, Mo., and C. W. Keiser, Jacksonville, Ill. Car-roof	Jan. 16, 1877	183	117	11	75
186,189	Same same	Jan. 16, 1877	384	117	11	75
194,286	Aldridge, Hiram, Saint Louis, Mo. Car-roof	Aug. 24, 1877	529	161	12	319
198,177	Aldridge, Hiram, assignor to D. L. Skidmore, Saint Louis, Mo., and F. C. Aldridge, Batesburg, S. C. Car-roof	Dec. 18, 1877	491	153	12	1033
193,103	Alexander, Alva, jr., South Windsor, Conn. Butter-mold	July 17, 1877	577	174	12	106
188,327	Alexander, Charles L., and D. Breed, Washington, D. C. Device for attaching buttons	Mar. 13, 1877	369	116	11	436
	Alexander, Henry D., *et al.* (*See* Road, Waterman J., assignor.)					
	Alexander, Horace C. (*See* Elliott & Alexander.)					
194,118	Alexander, Independence E. S., Henry, Tenn. Wagon-brake shoe	Aug. 14, 1877	358	106	12	288
192,141	Alexander, John R., Montreal, Canada. Truss	June 19, 1877	645	197	11	1078
192,888	Alexander, Joseph, Gallipolis, Ohio. Door-check	July 10, 1877	357	105	12	68
190,179	Alexander, Ralph W., Galesburg, Ill. Cultivator	May 1, 1877	69	19	11	755
196,412	Alexander, Samuel B., Springfield, Ohio. Extension-table slide	Oct. 23, 1877	763	220	12	693
196,413	Same Device for attaching legs to furniture	Oct. 23, 1877	764	221	12	693
194,395	Alexander, Samuel S. B., Mobile, Ala. Sleeping-car	Aug. 21, 1877	632	190	12	332
198,176	Alexander, Solomon A., York, Pa. Pressure-jack (hydraulic)	Dec. 18, 1877	491	153	12	1033
187,578	Alexander, Thomas, and W. Dunn, Saint Mary's, Canada. Railway-switch	Feb. 20, 1877	663	206	11	310
192,668	Alexander, William G., Winnemucca, Nev. Windmill	July 3, 1877	125	34	12	29
186,224	Alexander, Winfield S., Marysville, Ohio. Butter-press	Jan. 16, 1877	414	127	11	79
198,178	Alford, Albert, Chicago, Ill. Tobacco-pail	Dec. 18, 1877	493	153	12	1033
189,909	Alfred, Joseph H., Rosbach, Iowa. Vegetable-slicer	Apr. 24, 1877	937	286	11	705
198,482	Allan, George, and J. W. Brown, London, England. Electric-telegraph relay	Dec. 25, 1877	812	246	12	1088
	Allen and Hall. (*See* Allen, Abram, assignor.)					
	Allen & Sons, William. (*See* Allen, George L., assignor.)					
186,290	Allen, Aaron B., Barry, Ill. Stove-pipe	Jan. 16, 1877	470	144	11	86
197,583	Allen, Abram, assignor to Allen and Hall, Lansing, Mich. Blind	Nov. 27, 1877	907	270	12	917
186,514	Allen, Amzi, Marietta, Ohio. Car-coupling	Jan. 23, 1877	716	220	11	130
	Allen, Arnold S. (*See* Leach & Allen.)					
188,765	Allen, Benjamin F., Boston, Mass. Renovating printers' rolls	Mar. 27, 1877	813		11	514
197,446	Allen, Charles, Trenton, N. J. Rope-molding machine	Nov. 27, 1877	767	229	12	897
	Allen, Charles G. (*See* Lufkin & Allen.)					
	Allen, Cotton H. (*See* Deming, Lucius, assignor.)					
	Allen, Cotton H. (*See* Deming, Lucius and J. W., assignors.)					
193,069	Allen, Dana N., and J. M. Farrington, Concord, N. H., assignors to said Allen. Steam-boiler	July 10, 1877	531	161	12	101
	Allen, D. K., *et al.* (*See* Phelps, Ira M., assignor.)					
188,835	Allen, Edward G., Baltimore, Md. Perambulator	Mar. 27, 1877	897	273	11	525
186,190	Allen, Edwin, assignor to W. G. Ely, Norwich, Conn. Machine for cutting paper, cloth, &c	Jan. 16, 1877	386	117	11	75
188,223	Allen, Edwin, Norwich, Conn. Spool-printing machine	Mar. 13, 1877	271	85	11	423
7,647	Allen, Ethan, deceased, S. E. Allen executrix and assignor to S. Glover and B. L. Budd, Fairfield, Conn. Metallic cartridge (Reissue).	May 1, 1877	295	87		784 / 785
	Allen, Frank H. (*See* Lathrop & Allen.)					
195,245	Allen, Frank H., and J. Lathrop, assignors to selves and J. E. Warner, Norwich, Conn. Device for attaching hubs to axles	Sept. 18, 1877	525	152	12	489
194,883	Allen, Freeman S., Washington, D. C., assignor to I. H. Wood, Little Falls, N. Y. Slate-frame attachment	Sept. 4, 1877	125	38	12	418
	Allen, George L., *et al.* (*See* Jones, N. A. S., assignor.)					
189,077	Allen, George L., assignor to W. Allen & Sons, Worcester, Mass, Boiler-furnace front.	Apr. 3, 1877	59	22	11	567
186,918	Allen, George M., Hastings, Minn. Bag-holder	Feb. 6, 1877	1	1	11	203
	Allen Governor Company. (*See* Huntoon, Reuben K., assignor.)					
187,795	Allen, Henry, Milwaukee, Wis. Sewer-cleaner	Feb. 27, 1877	897	279	11	350
196,965	Allen, Hiram, and L. S. Mason, assignors to said H. Allen and L. Allen, Sandy Hill, N. Y. Apparatus for preparing paper pulp	Nov. 13, 1877	243	73	12	803
186,094	Allen, Isaac, La Belle, Mo. Device for watering stock	Jan. 9, 1877	283	85	11	54
192,403	Allen, Isaac H., Black Creek, Canada. Fire-escape	June 26, 1877	945	283	11	1129
188,563	Allen, James A., Albion, assignor to self and H. Osborn, Sheridan, Mich. Windmill	Mar. 20, 1877	608	188	11	478
186,095	Allen, James T., Philadelphia, Pa. Scaffold	Jan. 9, 1877	284	85	11	54
188,224	Allen, John F., New York, N. Y. Riveting-machine	Mar. 13, 1877	273	85	11	423
191,275	Same Valve for steam-engines	May 29, 1877	1209	363	11	937
193,631	Same Pneumatic engine	July 31, 1877	1134	342	12	200
194,396	Same Riveting-machine	Aug. 21, 1877	632	191	12	333
190,112	Allen, John W., Republic, Ohio. Ladder	May 1, 1877	1	1	11	747
	Allen, Loren. (*See* Allen & Mason, assignors.)					
	Allen, Mortimer. (*See* Newhouse & Allen.)					
189,593	Allen, Michael, Danvers, Mass. Pipe-coupling	Apr. 17, 1877	601	185	11	653
	Allen, Oscar. (*See* Seymour & Allen.)					
195,555	Allen, Oscar, Mount Morris, N. Y. Spoke-polishing machine	Sept. 25, 1877	825	245	12	541
189,886	Allen, Oscar M., Kalamazoo, Mich. Pencil	Apr. 24, 1877	916	279	11	702
195,072	Allen, Robert T. P., Farmdale, Ky. Type-distributing machine	Sept. 11, 1877	328	99 / 100	12	453
	Allen, Sarah E., executrix. (*See* Allen, Ethan) (Reissue.)					
	Allen, Silas A. (*See* Eason, Richard B., assignor.)					
	Allen, Theodore E. (*See* Yerby, George W., assignor.)					
	Allen, Uriah C. (*See* Kitchen & Allen.)					
	Allen, Uriah C. (*See* Kitchen, John, assignor,)					
	Allen, William. (*See* Jones, John, assignor.)					
	Allen, William, *et al.* (*See* Jones, N. A. T., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
189, 594	Allen, William J., Buffalo, N. Y. Sirup and sugar filter and process of cleaning the same.	Apr. 17, 1877	601	186	11	653
193, 589	Same.....Condenser for engines	July 31, 1877	1091	327	12	195
	Allen, William P., *et al.* (*See* Jones, N. A. T., assignor.)					
	Allen, William P. (*See* Van Uri, James J., assignor.)					
	Allen, William R., *et al.* (*See* Noble, Jay, assignor.)					
191, 218	Alley, Ezra H., and J. H. Fancher, Toledo, Ohio. Sleeping car berth	May 29, 1877	1158	347	11	931
196, 618	Allison, Joseph P., Normal, Ill. Spring bed-bottom	Oct. 30, 1877	982	286	12	735
198, 329	Allison, Joseph W., assignor to Farmer's Friend Manufacturing Company, Dayton, Ohio. Corn-planter	Dec. 18, 1877	646	197	12	1055
190, 699	Allison, Robert, Port Carbon, Pa. Rock-drill	May 15, 1877	624	186	11	843
194, 857	Allison, William C., Philadelphia, Pa. Hydraulic testing-machine	Sept. 4, 1877	101	32	12	414
187, 796	Allyn, Chauncey B., Grand Rapids, Mich. Cloth-measuring machine	Feb. 27, 1877	897	279	11	350
193, 796	Almond, Thomas R., Brooklyn, N. Y. Vapor-burner for heating purposes	Aug. 7, 1877	1	1	12	235
194, 025	Same.....Gas-burner for producing heat	Aug. 14, 1877	247	73	12	275
194, 397	Almy, Darwin, Bristol, R. I. Heel-stiffener for boots and shoes	Aug. 21, 1877	635	191	12	333
186, 289	Almy, George F., Delphus, assignor to self and H. M. Clark, Toledo, Ohio. Vehicle-wheel	Jan. 16, 1877	469	144	11	86
189, 009	Almy, George F., Delphus, assignor of one-half interest to H. M. Clark, Toledo, Ohio. Perforating-stamp	Apr. 3, 1877	1	1	11	559
194, 884	Almy, George F., Delphus, assignor to self and H. M. Clark, Toledo, Ohio. Perforating stamp-canceler and postmarker	Sept. 4, 1877	125	39	12	418
	Almy, James F., *et al.* (*See* Shaw, Ai B., assignor.)					
193, 908	Alt, John F., New York, N. Y. Flower-pot	Aug. 7, 1877	106	34	12	249
186, 446	Altemus, Lemuel, Olney, Pa. Earth-closet	Jan. 23, 1877	661	202	11	122
189, 678	Altenbrand, Henry, Brooklyn, N. Y. Malt-kiln	Apr. 17, 1877	681	210	11	664
	Altheide, Joseph H. (*See* Moll & Altheide.)					
187, 797	Altick, William, Dayton, Ohio. Broom-hanger	Feb. 27, 1877	899	279	11	350
198, 503	Altmann, Moritz, Camden, N. J. Shoulder-brace	Dec. 25, 1877	834	253	12	1090
	Alvord, Charles E. (*See* Alvord, Joseph D. and C. E.)					
	Same.....(*See* Churchill, Robert W., assignor.)					
	Same.....(*See* Ludden, Franklin, assignor.)					
189, 544	Alvord, Joseph D. and C. E., Bridgeport, Conn. Music-stand	Apr. 17, 1877	549	171	11	647
7, 874	Amann, Charles H., assignor of one-half interest to L. A. Harker, Columbus, Ohio. Pipe-elbow machine.....(Reissue)	Sept. 4, 1877	202	62	12	428
191, 634	Amann, Charles H., and L. A. Harker, Columbus, Ohio. Expanding mandrel	June 5, 1877	115	35	11	992
194, 066	Same.....Machine for cutting blanks for pipe-elbows	Aug. 14, 1877	86	85	12	280
7, 876	Amazeen, Christopher, New York, N. Y., assignor, by mesne assignments, to Union Paper Bag Machine Company, Philadelphia, Pa. Paper-bag machine....(Reissue)	Sept. 11, 1877	460	137 128	12	473
194, 635	Amborn, George W., Peabody, Kans. Key-hole cover	Aug. 28, 1877	871	260	12	375
196, 549	Ambrose, John C., Hillsborough, Ohio. Animal-trap	Oct. 30, 1877	923	267	12	726
187, 078	Am Ende, Charles G., Hoboken, N. J. Composition for preserving food	Feb. 6, 1877	154		11	223 224
187, 956	Same.....Composition for preserving	Mar. 6, 1877	1		11	381
	American Cable Screw Wire Company. (*See* Goddu, Louis, assignor.)					
	Same.....same.....(Reissue.)					
	American Cotton Tie Company, Limited. (*See* Carroll, William J., assignor.) (Reissue.)					
	American Machine Company. (*See* Barrow & Salter, assignors.)					
	American Paper Collar Company. (*See* Levine, Julius, assignor.)					
	American Screw Company. (*See* Crighton, William, assignor.)					
	Same.....(*See* Harvey, Hayward A., assignor).....(Reissue.)					
	Same.....(*See* Quimby, Edward E, assignor.)					
	Same.....(*See* Rogers, Charles D., assignor.)					
	American Ship Windlass Company. (*See* Manton & Remington, assignors.) (Reissue.)					
	American Staple Sewing Machine Company. (*See* Leavitt & Drew, assignors.)					
	American Straw Sewing Machine Company. (*See* Turner, Sidney S., assignor.) (Reissue.)					
	American Street Lighting Company. (*See* Coe, Edward, assignor.)					
	American Type Machine Company. (*See* Westcott, Charles S., assignor.)					
	American Watch Company. (*See* Woerd, Charles V., assignor.)					
	American Wood Paper Company. (*See* Keen & Burgess, assignors).....(Reissue.)					
192, 212	Ames, Azel, jr., Philadelphia, Pa. Apparatus for excavating privy-vaults	June 19, 1877	717	220	11	1088
193, 632	Amidon, Charles H., Miller's Falls, Mass., assignor of one-half interest to E. R. Saxton, Buffalo, N. Y. Bit-brace wrench	July 31, 1877	1135	348	12	201
190, 461	Amidon, Moses, and E. N. McKimm, Lathrop, Mo. Horse-detacher	May 8, 1877	365	106	11	802
	Amiss, George W. (*See* Wertenberger & Amiss.)					
192, 142	Amonett, Ammon A., assignor to self and J. E. Wells, Wrightsborough, Tex. Wheel-plow	June 19, 1877	646	198	11	1078
	Anderfuren, William J. (*See* Thomas & Anderfuren.)					
196, 619	Andert, George W., Woodsborough, Md. Railway-switch signal	Oct. 30, 1877	983	287	12	735
196, 854	Anderson, Albert H., Nebraska City, Nebr. Anvil-vise	Nov. 6, 1877	121	36	12	778
	Anderson, Alexander. (*See* Gilchrist & Anderson.)					
186, 096	Anderson, Alexander, London, Canada. Bread-cutter	Jan. 9, 1877	284	85	11	54
187, 580	Anderson, Austin E., Richmond, Va. Measuring oil-can	Feb. 20, 1877	665	207	11	311
196, 550	Anderson, Axel W., assignor to self and W. B. Heckerman, Bedford, Pa. Sun-dial	Oct. 30, 1877	924	267	12	726
188, 460	Anderson, Charles W., Pawtucket, R. I. Loom-shuttle	Mar. 20, 1877	515	159	11	465
192, 961	Anderson, Edgar J., assignor of one-half interest to J. Jensen, Racine, Wis. Vehicle-brake lever	July 10, 1877	422	127	12	78
188, 037	Anderson, Frank, Peekskill, N. Y. Suspension hook and clasp	Mar. 6, 1877	84	24	11	391
195, 970	Anderson, Henry B., Saint Louis, Mo. Bottle-stopper and fastening	Oct. 9, 1877	293	82	12	610
188, 836	Anderson, James, Boston, Mass. Gas-burner	Mar. 27, 1877	896	273	11	527
197, 307	Anderson, James, jr., assignor to self and T. L. Anderson, Anderson, Ohio. Grain-car.	Nov. 20, 1877	609	180	12	864
	Anderson, James C. (*See* Greenawalt & Anderson.)					
198, 179	Anderson, James C., Allegheny, Pa. Sash-balance	Dec. 18, 1877	494	153	12	1033
	Anderson, John. (*See* Dudley & Anderson.)					
	Anderson, John N. (*See* Mellinger, Christian K., assignor.)					
187, 080	Anderson, John T., Philadelphia, Pa. Type-writer	Feb. 6, 1877	155	52	11	224
8, 006	Anderson, John W., South Bend, Ind. Wagon-brake lever.....(Reissue)	Dec. 25, 1877	1058	322	12	1123
187, 579	Same.....same	Feb. 20, 1877	664	207	11	311
196, 177	Anderson, John W., New York, N. Y. Thill-coupling	Oct. 16, 1877	518	150	12	650
196, 106	Anderson, Robert C., Wood Green, England. Safety-valve	Oct. 16, 1877	446	150	12	640
	Anderson, Robert J. (*See* Williams, Roger, assignor.)					
	Anderson, Thomas L. (*See* Anderson, James, jr., assignor.)					
194, 026	Anderson, Wendell A., La Cross, Wis. Copying-book	Aug. 14, 1877	247	73	12	275
	Anderson, William P. (*See* Sample, Jacob R., assignor.)					
196, 551	Andree, Ernst W., Milwaukee, Wis. Lamp-fount	Oct. 30, 1877	924	267	12	726
193, 797	Andress, Thomas, Auroraville, Wis. Draft attachment for wagons	Aug. 7, 1877	2	1	12	235

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
189,541	Andrew, William E., New York, N. Y. Process and apparatus for rendering fats	Apr. 10, 1877	529	165	11	636
191,089	Andrews, Albert F., New Haven, Conn. Case-hardening malleable iron casting	May 22, 1877	1013		11	903
	Andrews, Alfred H., *et al.* (*See* Mallett, Francis W., assignor.)					
	Andrews, Chancy H., *et al.* (*See* Stouffer, Hiram C., assignor.)					
186,515	Andrews, Charles B., assignor of part interest to S., jr., and A. B. Hauck, Lebanon, Pa. Meat-cutter	Jan. 23, 1877	716	220	11	130
7,825	Andrews, Emery, Portland, Me., and W. Tucker, Philadelphia, Pa., assignors, by mesne assignments, to S. E. and A. Spring and J. C. Jordan, Portland, Me. Machine for making match-blocks (Reissue)	July 31, 1877	1308	392	12	225
	Andrews, Herbert L., *et al.* (*See* Mallett, Francis W., assignor.)					
190,662	Andrews, Herbert L., Chicago, Ill. Blackboard eraser	May 15, 1877	591	175	11	839
191,794	Andrews, Hezekiah P., Boston, Mass. Cigar-lighter	June 12, 1877	275	85	11	1018
192,614	Same.....Sash-fastener	July 3, 1877	60	17	12	20
188,837	Andrews, James E., New York N. Y. Straw-cutter	Mar. 27, 1877	899	273	11	525
192,959	Andrews, John, Marlborough, Mass. Sash-fastener	July 10, 1877	420	126	12	78
193,840	Andrews, Thomas A., Gainesville, Tex. Faucet	Aug. 7, 1877	42	14	12	240
193,841	Same.....Fire-escape	Aug. 7, 1877	42	14	12	240
	Andrews, Upson A., *et al.* (*See* Stouffer, Hiram C., assignor.)					
193,909	Andrews, Walter H., and H. Fuller, Deckerville, Mich. Tide-wheel	Aug. 7, 1877	107	34	12	249
193,134	Andrews, William, Lisbon Falls, Me. Steam-valve	July 17, 1877	602	182	12	110
192,960	Andrews, William R., Mansfield, Conn. Shedding-mechanism for looms	July 10, 1877	421	127	12	78
197,536	Andrus, John H., and T. L. Hammond, Waverly, Iowa. Umbrella-support for vehicles	Nov. 27, 1877	863	257	12	911
198,444	Same.....Vehicle-shade	Dec. 25, 1877	775	235	12	1083
	Andrus, Samuel N. (*See* Newall, George E., assignor.)					
197,584	Angamar, Eugene H., New Orleans, La., assignor to Angamar Motor Company. Steam-motor for city passenger-cars	Nov. 27, 1877	908	270, 271	12	917
	Angamar Motor Company. (*See* Angamar, Eugene H., assignor.)					
	Angell & Blake Manufacturing Company. (*See* Blake, George W., assignor.)					
188,490	Angell, Albert, East Orange, N. J., assignor to C. F. A. Henrichs, Brooklyn, N. Y. Lamp-burner	Mar. 20, 1877	543	167	11	468
	Angelo, Theodore. (*See* Rundquist & Angelo.)					
186,782	Angle, Lewis M., Chicago, Ill. Barbers' and dentists' chair	Jan. 30, 1877	976	304	11	175
	Angora Woolen Company. (*See* Greene, John F., assignor.)					
	Anke, Franz R. (*See* Meissner, Romer & Anke.)					
198,065	Annin, James, Le Roy, N. Y. Napkin ring and holder	Dec. 11, 1877	358	111	12	1007
193,104	Antes, Hery, assignor of one-half interest to W. H. Weidling, Philadelphia, Pa. Ice-creeper	July 17, 1877	578	174	12	106
190,533	Anthony, Charles S., and J. Manheim, Taunton, Mass. Device for preventing the accumulation of frost and steam upon store-windows	May 8, 1877	434	127	11	811
	Anthony & Co., E. and H. T. (*See* Lewis, William H., assignor.)					
	Anthony, Edward, *et al.* (*See* Buzby, Albert G., assignor.)					
	Anthony, Henry T., *et al.* (*See* Buzby, Albert G., assignor.)					
195,246	Anthony, Jacob J., Sharon Springs, N. Y. Steam-engine	Sept. 18, 1877	225	153	12	489
196,320	Same.....Car-brake	Oct. 23, 1877	679	196	12	680
195,471	Anthony, James R., Cedar Rapids, Iowa. Water-proof cellar-bottom	Sept. 25, 1877	750	221	12	530
195,739	Anthony, John H., Camanche, Iowa. Tool-handle	Oct. 2, 1877	50	15	12	567
	Anthony, Rowland C. (*See* Yerington, Henry W., assignor) (Reissue.)					
195,913	Antisdale, Julius O., Lake Harbor, Mich. Plant and tree protector	Oct. 9, 1877	232	66	12	602
198,330	Appleby, Charles O., Yonkers, N. Y. Machine for setting up barrels	Dec. 18, 1877	647	197	12	1055
195,073	Appleby, Stephen V., Spotswood, N. J. Apparatus for grinding tobacco	Sept. 11, 1877	330	100	12	453
189,167	Applegate, James R., Philadelphia, Pa. Machine for incasing pocket portraits	Apr. 3, 1877	133	48	11	577
195,074	Applegate, Samuel S., Camden, N. J. Circuit-closer for electric burglar-alarms	Sept. 11, 1877	332	100	12	453
196,512	Appleton, George P., Pembroke, N. H. Oscillating printing-press	Oct. 23, 1877	870	251	12	706
	Appleton, John, *et al.* (*See* Ingels, Thomas J., assignor.)					
	Appleton Manufacturing Company. (*See* Rewell, Guilford D., assignor.)					
192,479	Appleyard, Thomas W. and W. K., Leeds, England. Fleshing-machine for hides and skins	June 26, 1877	1006	303, 304, 305	11	1138
	Appleyard, Walter K. (*See* Appleyard, Thomas W. and W. K.)					
186,701	Arbey, Ferdinaod, Paris, France. Lathe for turning irregular bodies	Jan. 30, 1877	903	279	11	164
186,702	Same.....Carving attachment for lathes	Jan. 30, 1877	904	280	11	164, 165
186,703	Same.....Tenoning and mortising machine	Jan. 30, 1877	905	280	11	165
186,704	Same.....Machine for jointing staves	Jan. 30, 1877	906	280	11	165
	Arbey, Pierre F. (*See* Godeau, Frederick, assignor.)					
188,328	Arbogast, Philip, assignor of part interest to G. T. Plunkett and D. O. Cunningham, Pittsburg, Pa. Glass-furnace	Mar. 13, 1877	369	116	11	436
196,321	Arbogast, Philip, Pittsburg, Pa. Glass-furnace	Oct. 23, 1877	679	196	12	681
196,855	Arbogast, Philip, assignor of one-half interest to J. L. Dawes, Sons & Co., Pittsburg, Pa. Method of making glass labels and apparatus therefor	Nov. 6, 1877	121	37	12	778
196,178	Arbuckle, John, Brooklyn, N. Y. Separating stones, &c., from grain &c	Oct. 16, 1877	519		12	650
190,534	Archbold, Samuel, and J. Haug, Philadelphia, Pa. Compound engine	May 8, 1877	415	127	11	811
194,570	Archer, David, jr., Brier Hill, N. Y. Adjustable-wheel cultivator	Aug. 28, 1877	819	243	12	367
186,191	Archer, George W., Rochester, N. Y. Screw for piano-stools	Jan. 16, 1877	386	117	11	75
188,329	Archer, George W., Rochester, N. Y. Dental and barber's chair	Mar. 13, 1877	371	116	11	436
190,462	Archer, William S., Dayton, Ohio. Horse hay-rake	May 8, 1877	365	106	11	802
	Ardito, John. (*See* Quirolo, Antonio, assignor) (Reissue)					
	Armitage, Walter. (*See* Silvester, William, assignor.)					
	Armor, Robert R. (*See* Curtis, William H., assignor.)					
	Armstrong, Amelia P., *et al.* (*See* Thiers, William F., assignor.)					
196,067	Armstrong, Charles W., and R. A. Tyrrel, Detroit, Mich., assignors, by mesne assignments, to said Armstrong. Multiplying show-case for exhibiting carpets, &c	Oct. 16, 1877	399	115	12	633
	Armstrong, Frank. (*See* Mathewson, Edwin W., assignor.)					
188,330	Armstrong, Frank, Bridgeport, Conn. Buckle attachment for elastic bands or straps	Mar. 13, 1877	373	117	11	436
189,168	Same.....Lathe-chuck	Apr. 3, 1877	133	48	11	577
189,986	Same.....Coil-spring band	Apr. 24, 1877	1006	308	11	714
190,535	Same.....Garter	May 8, 1877	436	128	11	811
7,644	Armstrong, John B., Guelph, Canada. Furnace for heating steel in tempering. (Reissue)	May 1, 1877	292	86	11	784
	Armstrong, John F. (*See* Armstrong, Smith & Armstroug.)					
197,308	Armstrong, John J., Texana, Tex. Post-hole digger	Nov. 20, 1877	610	180	12	864
196,322	Armstrong, Uel W. Evansville, Ind. Mosquito-net canopy	Oct. 23, 1877	680	196	12	681

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Armstrong, William J., *et al.* (*See* McCaffrey, Thomas H., assignor.)					
191,745	Armstrong, William S., La Crosse, Wis. Millstone-driver	June 12, 1877	231	73	11	1,013
197,810	Armstrong, Willis, J. F. Smith, and J. F. Armstrong, Owensville, Ind. Stump-burner	Dec. 4, 1877	104	32	12	961
189,910	Arnao, Juan, and J., jr., Brooklyn, N. Y. Steam ice-boat	Apr. 24, 1877	937	286	11	705
186,971	Arndt, Daniel, Cleveland, Ohio. Safety-gate for draw-bridges	Feb. 6, 1877	56	19	11	209
187,581	Arney, John H., Lancaster, Ohio. Hand corn-planter	Feb. 20, 1877	666	207	11	311
	Arno, Oliver H. (*See* Kelly & Arno.)					
7,502	Arnold, Alonzo C., and E. Blackman, Norwalk, Conn., assignors, by mesne assignments to said E. Blackman. Lamp (Reissue)	Feb. 13, 1877	535	164	11	285
190,536	Arnold, Andrew R., Newark, N. J. Water-meter	May 8, 1877	436	128	11	811
193,207	Same.....Making thread, &c	July 17, 1877	664	203, 204	12	119
191,295	Arnold, Barnard, Foster Centre, R. I. Stopper attachment	May 29, 1877	1228	369	11	940
187,745	Arnold, Benjamin, East Greenwich, R. I. Differential chain for pulley-blocks	Feb. 27, 1877	845	263	11	343
190,998	Arnold, Charles R., Bloomingdale, N. Y. Door-fastening	May 22, 1877	929	274	11	891
	Arnold, George A., *et al.* (*See* Knapp, George S., assignor.)					
187,799	Arnold, Hudson H. C., Howard, Ohio. Cover for cups	Feb. 27, 1877	900	280	11	350
193,208	Arnold, John, Newark, N. J. Trunk-hinge	July 17, 1877	672	205	12	119
197,074	Same.....Trunk-catch	Nov. 13, 1877	359	106	12	819
197,798	Arnold, Lauren B., Gates, assignor of two-thirds interest to J. Higgins, Berkshire, N. Y., and J. S. Ellsworth, Barre, Mass. Cheese-making process	Feb. 27, 1877	900		11	350
188,226	Arnold, Lauren B., Rochester, N. Y. Cheese-making process	Mar. 13, 1877	276		11	423
190,113	Arnold, William B., North Abington, Mass. Manufacture of heels for boots and shoes	May 1, 1877	1	1	11	747
190,114	Same.....Peg-float	May 1, 1877	2	1	11	747
195,323	Arnold, William H., and N. Petersen, Memphis, Tenn. Frame for supporting mosquito-nets	Sept. 18, 1877	594	174	12	490
190,663	Arnold, William P., and G. Quigley, Fredericksburg, Va. Bag-machine	May 15, 1877	592	175	11	839
196,856	Aronson, Leon, San Francisco, Cal., assignor to Toklas, Brown & Co., New York, N. Y. Overalls	Nov. 6, 1877	122	37	12	778
194,119	Arpissella, Carlo, Old Point Comfort, Va. Sounding-toy	Aug. 14, 1877	358	106	12	288
192,404	Arter, Francis G., Lima, Ohio. Thill-coupling	June 26, 1877	945	283	11	1129
	Arthur, Charles. (*See* Robinson, James F., assignor.)					
190,803	Arthur, Charles M., assignor of one-half interest to R. R. Colburn, Ansonia, Conn. Paper box	May 15, 1877	717	213	11	855
188,225	Arthur, Isaiah, Shepherdstown, Pa. Scroll-sawing machine	Mar. 13, 1877	274	86	11	423
196,620	Arthur, Isaiah, Mechanicsburg, Pa. Splicing-bar for vehicle-axles	Oct. 30, 1877	984	287	12	735
197,198	Same.....Lifting-jack	Nov. 20, 1877	505	149	12	849
	Arthurs, James. (*See* Carr & Arthurs.)					
189,010	Artley, Sylvester, O. Berg, and H. Dieterlea, Chicago, Ill., said Berg and Dieterlea assignors to said Artley. Sewing-machine motor	Apr. 3, 1877	2	1	11	559
	Asbestos Packing Company. (*See* Guest, Henry W., assignor.)					
	Asbury, T. Henry. (*See* Baker & Asbury.)					
192,047	Ash, Benjamin, New York, N. Y. Cigar-box	June 19, 1877	555	169	11	1067
194,287	Ashbourne, Alexander P., Oakland, Cal. Treating cocoa-nut	Aug. 21, 1877	530		12	319
	Ashcroft, Edward H. (*See* Rodgers, Thomas W., assignor.)					
7,967	Ashcroft, Edward H., Lynn, Mass., assignor to J. Densmore, Meadville, Pa. Railway-car heater (Reissue)	Nov. 27, 1877	1055	317	12	937
197,510	Ashcroft, John, assignor to S. J. Ashcroft, Brooklyn, N. Y. Grate-bar for furnaces	Nov. 27, 1877	834	249	12	906
	Ashcroft, Sarah J. (*See* Ashcroft, John, assignor.)					
192,213	Ashcroft, William A., Des Moines, Iowa. Injector	June 19, 1877	718	220	11	1088
191,822	Ashelman, John B., assignor of one-half interest to F. Ives, Red Wing, Minn. Removable carriage-top	June 12, 1877	309	95	11	1022
197,585	Ashman, John S., Boston, Mass. Pocket-box for violin-strings	Nov. 27, 1877	911	272	12	917
	Ashmore, David N. (*See* Hale, Chesley I., assignor.)					
186,783	Ashton, Henry G., Boston, Mass. Safety-valve attachment to utilize escape-steam	Jan. 30, 1877	977	304	11	175
197,072	Ashton, Henry G., and J. E. Maynadier, assignors to H. G. Ashton and C. J. Bishop, Boston, Mass. Safety-valve	Nov. 13, 1877	355	105	12	819
197,073	Ashton, Henry G., Somerville, Mass. Safety-valve attachment to utilize the escape-steam	Nov. 13, 1877	357	105	12	819
190,463	Ashworth, Harvey T., Chatham, Va. Mill-spindle bush	May 8, 1877	368	107	11	802
121,296	Asheworth, James S., and J. J. Hanson, Philadelphia, Pa. Shedding mechanism for looms	May 29, 1877	1228	369	11	940
195,075	Ashworth, John, Somerville, assignor to B. Poland, Arlington, Mass. Wire-brush machine	Sept. 11, 1877	332	101	12	454
196,179	Ashworth, John, Somerville, Mass. Peg or fastening for boots and shoes	Oct. 16, 1877	520	151	12	650
	Askins & Brother. (*See* Askins, Joseph, assignor.)					
186,516	Askins, Joseph, assignor to Askins & Brother, Elida, Ohio. Burial-case	Jan. 23, 1877	717	221	11	130
195,556	Askins, Joseph, Elida, Ohio. Burial-case	Sept. 25, 1877	826	245	12	541
	Asper, Benjamin F., *et al.* (*See* Dunlap & Magill, assignors.)					
189,911	Aspinwall, Lewis A., Albany, N. Y. Potato-digger	Apr. 24, 1877	938	286, 287	11	705
186,405	Assmann, Albert Linden, assignor to self and M. H. Volkmann, Rahway, N. J. Spring whiffletree	Jan. 23, 1877	619	189	11	117
196,323	Astall, Jesse, Galveston, Tex. Pipe and bar cutter	Oct. 23, 1877	681	196	12	681
191,821	Atchison, Robert R., Boston, Mass. Machine for cutting marble, granite, &c	June 12, 1877	307	95	11	1022
	Ater, William W., *et al.* (*See* Quinby & Whiting, assignors) (Reissue)					
	Atherton, Abel T., *et al.* (*See* Gilchrist & Anderson, assignors.)					
	Atherton, Abel T. (*See* Whitehead & Atherton.)					
195,740	Atkins, Elias C., Indianapolis, Ind. Crosscut-saw handle	Oct. 2, 1877	51	15	12	568
193,209	Atkins, George W., Milton, Del., assignor of one-half interest to G. H. Hulings. Saw-sharpener and tooth-gage	July 17, 1877	673	205	12	119
195,787	Atkins, George W., Noble's Lake, Ark. Horse-detacher	Oct. 2, 1877	92	27	12	574
	Atkinson, Alfred, *et al.* (*See* Woolcock, William, assignor.)					
189,912	Atkinson, Charles, Monterey, Ill. Plow	Apr. 24, 1877	939	287	11	705
194,120	Atkinson, Charles A., New York, N. Y. Fountain-pen	Aug. 14, 1877	359	106	12	288
195,324	Same.....Perfumed charm	Sept. 18, 1877	595	175	12	500
189,011	Atkinson, Charles W., assignor to H. Atkinson, Indianapolis, Ind. Horseshoe	Apr. 3, 1877	4	1	11	559
	Atkinson, Henry. (*See* Atkinson, Charles W., assignor.)					
	Atkinson, Henry C. (*See* Atkinson, William B. and H. C.)					
186,030	Atkinson, James S., Pittsburg, assignor to B. F. Jones, Allegheny, Pa. Machine for slitting metallic plates	Jan. 9, 1877	220	66, 67	11	46
186,972	Same.....Manufacture of finger-bars	Feb. 6, 1877	57	19	11	209
192,048	Atkinson, James S., assignor to Jones & Laughlins, Pittsburg, Pa. Adjusting clamp	June 19, 1877	556	169	11	1067

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
192,405	Atkinson, James S., assignor to Jones & Laughlins, Pittsburg, Pa. Journal box and bearing	June 26, 1877	946	283	11	1129
193,842	Atkinson, James S., Pittsburg, assignor to B. F. Jones, Allegheny, Pa. Dividing cold-rolled iron	Aug. 7, 1877	43	14	12	240
191,636	Atkinson, James W., Chicago, Ill. Skylight-bar	June 5, 1877	116	36	11	972
191,635	Atkinson, Thomas A., Merced, Cal. Bee-hive	June 5, 1877	116	36	11	992
198,066	Atkinson, William B. and H. C., Franklin, Ky. Evaporating-pan	Dec. 11, 1877	359	111	12	1008
	Atlantic Refining Co., *et al.* (*See* Perkins, George H., assignor.)					
189,169	Atteberry, Robert E., Savannah, Iowa. Animal-poke	Apr. 3, 1877	134	48	11	577
	Atterbury, James S. (*See* Atterbury, Thomas B., assignor.)					
	Same.....same.....(Reissue.)					
7,747	Atterbury, James S. and T. B., assignors to Ditbridge & Co., Pittsburg, Pa. Making smoke-bells.....(Reissue)	June 19, 1877	845	256	11	1104
	Atterbury, Thomas B. (*See* Atterbury, James S. and T. B.).....(Reissue.)					
7,529	Atterbury, Thomas B., assignor to self and J. S. Atterbury, Pittsburg, Pa. Combined lamp chimney and shade.....(Reissue)	Feb. 27, 1877	1054	325	11	371
194,495	Same.....Hinged top for glassware	Aug. 21, 1877	739	220	12	346
195,247	Atwater, Lucius L., Auburn, N. Y. Exercising-machine	Sept. 18, 1877	227	153	12	490
198,331	Atwood, Benjamin E., Newville, Cal. Brake-shoe holder	Dec. 18, 1877	649	197	12	1055
	Atwood, C. E. (*See* Thorpe, Thomas P., assignor.)					
7,966	Attwood, Corydon F., Hancock, Wis., assignor, by mesne assignments, to J. F. Wiley, V. C. Price, and T. F. Keating. Time-lock.....(Reissue)	Nov. 27, 1877	1054	316	12	937
189,295	Atwood, James E., Harrisburg, Pa. Tuyere-machine	Apr. 10, 1877	293	93	11	60
186,919	Atwood, Kimball C., New York, N. Y. Doll	Feb. 6, 1877	2	1	11	203
193,105	Same.....Insect-destroying machine	July 17, 1877	579	174	12	106
194,759	Same.....Machine for sewing bags, &c	Sept. 4, 1877	1	1	12	401
187,800	Atwood, Lewis J., assignor to Plume & Atwood Manufacturing Company, Waterbury, Conn. Lamp	Feb. 27, 1877	901	280	11	350
185,848	Atwood, Loring, Rutland, Vt., assignor to self and W. C. French, Boston, Mass. Cradle and crib	Jan. 2, 1877	34	11	11	13
191,017	Atwood, Moses, New Sharon, Iowa. Running-gear	May 22, 1877	951	282	11	894
188,491	Atwood, Otis W., Lynn, Mass. Reefing-sails	Mar. 20, 1877	544	167	11	468
	Auer, John. (*See* Wilson, Sorg & Auer.)					
196,857	Aufderheide, Johann H., Kaiserslautern, Rhenish Bavaria, Germany. Boot-jack	Nov. 6, 1877	123	37	12	778
	Aulabaugh, Crume & Co. (*See* Aulabaugh, Peter M., assignor.)					
	Same.....(*See* Crume & Aulabaugh, assignors.)					
	Aulabaugh, Peter M. (*See* Crume & Aulabaugh.)					
198,332	Aulabaugh, Peter M., assignor to Aulabaugh, Crume & Co., Dayton, Ohio. Paper vessel	Dec. 18, 1877	649	198	12	1055
	Auld, John G. (*See* Huston, Robert W., assignor.)					
186,097	Ault, William, Bremen, Ind. Pump	Jan. 9, 1877	285	86	11	55
197,988	Austin, Alvah C., Oakland, assignor to A. Chabot, Alameda County, Cal. Piston water-meter	Dec. 11, 1877	288	89	12	996
189,987	Austin, Amos S., Philadelphia, Pa. Fire-extinguisher	Apr. 24, 1877	1007	308	11	714
192,889	Austin, Cyrus B. and M. S., Cuba, Ohio. Gate-latch	July 10, 1877	357	105	12	69
191,746	Austin, Henry W., and W. B. Hosford, Chicago, Ill. Furnace	June 12, 1877	231	73	11	1013
195,248	Austin, James A., Brooklyn, N. Y. Bill-file	Sept. 18, 1877	228	154	12	490
7,530	Austin, Lloyd W., assignor to Albert Field Tack Company, Taunton, Mass. Manufacture of shoe-nails.....(Reissue)	Feb. 27, 1877	1055	325	11	371
	Austin, Martin S. (*See* Austin, Cyrus B. and M. S.)					
193,843	Austin, William J., Chicago, Ill. Feed-water heater and filter	Aug. 7, 1877	44	14	12	240
194,121	Austin, William W., Lowell, Mass. Lamp for burning naphtha-gas	Aug. 14, 1877	360	107	12	288
196,414	Austine, Jacob, Huntsville, Ohio. Miller's paint staff	Oct. 23, 1877	764	221	12	693
195,788	Averell, Edward W., New York, N. Y. Fire-escape	Oct. 2, 1877	92	27	12	575
197,309	Averell, George W., Monsey, N. Y. Station-indicator	Nov. 20, 1877	611	181	12	864
194,636	Averell, John D., New York, N. Y. Coal-gas purifying apparatus	Aug. 28, 1877	872	260	12	375
186,517	Averill, Hartley, and F. B. Ginn, Boston, Mass. Paper collar	Jan. 23, 1877	718	221	11	130
195,693	Averill, Henry K., jr., Plattsburg, N. Y. Attachment to parallel rulers	Oct. 2, 1877	2	1	12	561
	Avery, Benjamin F. (*See* Wiard, Edward, assignor.)					
	Avery, Cyrus M., *etal.* (*See* Goff, James M., assignor).....(Reissue.)					
192,049	Avery, Ira, Tunkhannock, Pa. Chain-pump bucket	June 19, 1877	557	170	11	1067
195,435	Avery, James W., Peoria, Ill. Chain-pump	Sept. 25, 1877	713	211	12	525
	Avery, Oliver, jr., *et al.* (*See* Colby, Ellery E., assignor.)					
189,170	Avery, Oliver, jr., Groton, and C. Bartholomew, Etna, N. Y. Bridge-pier	Apr. 3, 1877	134	48	11	577
189,171	Avery, Oliver, jr., Groton, and C. Bartholomew, Dryden, N. Y. Bridge-pier	Apr. 3, 1877	136	49	11	578
198,530	Avery, Oliver, jr., Groton, N. Y. Sad-iron	Dec. 25, 1877	857	261	12	1094
196,115	Avery, Owen M., Pensacola, Fla. Stake-holder for platform-cars	Oct. 23, 1877	765	221	12	693
	Avery, Robert H., *et al.* (*See* Goff, James M., assignor).....(Reissue.)					
191,090	Avey, Elijah, Mount Morris, Ill. Milking-stool	May 22, 1877	1013	302	11	903
195,249	Axford, Samuel, Freeport, Ill. Baking-oven	Sept. 18, 1877	529	154	12	490
191,091	Axford, William H., Jersey City, N. J. Hoisting-gear for slaughtering cattle	May 22, 1877	1014	302	11	903
195,557	Axt, August, assignor of one-half interest to A. Gentzsch, Philadelphia, Pa. Refrigerator and water-cooler	Sept. 25, 1877	827	246	12	541
7,467	Ayer, John M., Chicago, Ill. Refrigerating-car.....(Reissue)	Jan. 16, 1877	614	{187 188	{11	103
197,071	Same.....Roof for railway-cars and other structures	Nov. 13, 1877	355	105	12	819
	Ayres, G. Ralston, *et al.* (*See* Ayres, John C., assignor.)					
187,342	Ayres, John C., assignor to W., G. R., W. M., and L. H. Ayres, Philadelphia, Pa. Horse-blanket attachment	Feb. 13, 1877	425	133	11	272
189,172	Ayres, John C., assignor to self, W., G. R., W. M., and L. H. Ayres, Philadelphia, Pa. Horse-blanket	Apr. 3, 1877	137	49	11	578
	Ayres, Lewis H., *et al.* (*See* Ayres, John C., assignor.)					
	Ayres, William, *et al.* (*See* Ayres, John C., assignor.)					
187,244	Ayres, William G., and G. Whittaker, Brooklyn, N. Y. Revolving fire-arm	Feb. 13, 1877	327	105	11	259
	Ayres, William M., *et al.* (*See* Ayres, John C., assignor.)					
193,910	Baackes, John M. E., assignor of two-thirds interest to J. L. Stephens and J. B. Mecklenborg, Covington, Ky. Machine for notching wire in the manufacture of nails	Aug. 7, 1877	107	35	12	249
194,027	Babb, James N., Summerfield, Mich. Saw-guide	Aug. 14, 1877	248	73	12	275
195,741	Babbidge, Stephen R., Rockland, Me. Center-board for vessels	Oct. 2, 1877	51	16	12	563
194,398	Babbitt, Benjamin T., New York, N. Y. Vehicle-axle	Aug. 21, 1877	636	191	12	333
194,399	Same.....Axle for railway-cars	Aug. 21, 1877	636	191	12	333
198,067	Same.....Air-compressor	Dec. 11, 1877	360	112	12	1008
194,858	Babbitt, S. William, assignor to Wilcox Silver Plate Company, West Meriden, Conn. Covered pitcher	Sept. 4, 1877	103	32	12	414

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
196,180	Babbitt, S. William, assignor to Wilcox Silver Plate Company, West Meriden, Conn. Covered article of plated ware	Oct. 16, 1877	521	151	12	650
	Babcock & Wilcox. (*See* Cobb, Delphin B., assignor.)					
192,214	Babcock, George H., Plainfield, N. J., and S. Wilcocx, Brooklyn, N. Y. Water-coil steam-generator	June 19, 1877	719	220	11	1088
	Babcock, Samuel. (*See* Babcock & Upton, assignors.)					
190,115	Babcock, Sanford, and C. E. Mason, Springfield, Ill. Dental tool	May 1, 1877	2	1	11	747
193,590	Babcock, Sylvester P., Adrian, Mich. Hand-planter	July 31, 1877	1091	327	12	195
196,552	Babcock, Theodore H., Brooklyn, and F. G. Upton, New York, N. Y., assignors of one-third interest to S. Babcock, Middletown, Conn. Cigar	Oct. 30, 1877	925			726
190,404	Babcock, William, Plainfield, Conn. Skid	May 8, 1877	309	91	11	795
191,018	Babcock, Samuel W., Haverstraw, N. Y. Machine for sanding brick-molds	May 22, 1877	952	282	11	894
	Bach, Jacques. (*See* Kranich & Bach.)					
198,557	Bachelder, John, Napa, Cal. Wool-washing machine	Dec. 25, 1877	879		12	1098
191,093	Bacher, Ernest, Findlay, Ohio. Bottle-opener	May 22, 1877	1015	303	11	903
189,988	Bachmann, Johann, Nurnberg, Germany. Belt-fastener	Apr. 24, 1877	1008	309	11	715
191,092	Bachmann, Sophie E., New York. Toy skating-rink	May 22, 1877	1015	302	11	903
191,276	Backes, Michael, Wallingford, Conn., assignor to G. Parsons, Brooklyn, N. Y. Paper box	May 29, 1877	1210	363	11	938
	Backus, Emmitt W. (*See* Backus, James L. and E. W.)					
188,089	Backus, James L. and E. W., Rock Falls, Ill., assignors of one third interest to J. R. Gilchrist, Mount Pleasant, Iowa.) Machine for cutting iron	Mar. 6, 1877	123	37	11	397
192,670	Backus, Thomas C., Brooklyn, N. Y. Rope or line carrying projectiles	July 3, 1877	126	34	12	29
194,544	Bacon, Charles, and J. L. Thomas, Posey County, Ind. Fire-escape	Aug. 28, 1877	796	237	12	463
188,227	Bacon, Charles N., Winchester, Mass. Blackboard-rubber	Mar. 13, 1877	276	86	11	423
189,173	Bacon, Dennis C., Litchfield, Ill. Corn-planter	Apr. 3, 1877	137	49	11	578
188,564	Bacon, George N., Wilkesbarre, Pa. Stove-cover	Mar. 20, 1877	609	188	11	478
195,250	Bacon, George W., South Groveland, Mass. Channeling-machine	Sept. 18, 1877	530	154	12	490
	Bacon, Gilbert, *et al.* (*See* Bacon, Jerome, assignor.)					
195,789	Bacon, James D., assignor of one-half interest to A. S. Cady, New York, N. Y. Form for leather-crimping machines	Oct. 2, 1877	94	28	12	575
193,747	Bacon, Jerome, assignor of two-thirds interest to G. Bacon and A. V. Holcomb, Medina, Wis. Vehicle-wheel	July 31, 1877	1243	373	12	216
197,004	Bacon, John, Saint Johnsbury, Vt. Paper-machine	Nov. 13, 1877	285	84	12	809
7,719	Badcock, Henry, Pittsburg, Pa. Rope-socket for oil-wells	(Reissue) June 5, 1877	218	69	11	1006
	Badger, Franklin O. (*See* Bliss & Badger.)					
190,729	Badger, John, Belvidere, Ill. Horse hay-rake	May 15, 1877	658	195	11	847
187,801	Badger, Thomas H., Boston, Mass. Ash-sifter	Feb. 27, 1877	902	280	11	350
	Badglo, Norman E., *et al.* (*See* Rebasz, Lyman A., assignor.)					
198,180	Baecker, Heinrich, Remscheid, Germany. Bench-plane	Dec. 18, 1877	495	154	12	1033
	Baffoy, Pierre H. (*See* Rogé, Poret, Baffoy, and Dupré.)					
	Bagger & Co., Louis. (*See* Skaaraas, Ole N., assignor.)					
	Baggs, Andrew H. (*See* Fox, William, assigoor.)					
188,766	Bagnicki, Ernest, and A. Groeschel, Jersey City Heights, N. J. Insect-destroying composition	Mar. 27, 1877	814		11	514
	Bailey & Brothers, D. M. (*See* Boals, James A., assignor.)					
189,595	Bailey, Benjamin, Yale, British Columbia. Button	Apr. 17, 1877	602	186	11	653
193,210	Bailey, Benjamin N., assignor of one-half interest to E. Naegele, Philadelphia, Pa. Burglar-alarm	July 17, 1877	674	205	12	120
196,416	Bailey, B. Norman, Philadelphia, Pa. Burglar-alarm	Oct. 23, 1877	766	221	12	693
191,094	Bailey, Charles A., Cobalt, Conn. Toy pistol	May 22, 1877	1016	303	11	903
195,325	Same. Coffin-handle	Sept. 18, 1877	595	175	12	500
195,326	Same. Spinning-top	Sept. 18, 1877	596	175	11	500
190,180	Bailey, Cyrus, Akron, Ohio. Grain-reducing apparatus	May 1, 1877	70	19	11	755
196,107	Bailey, Dexter S., Dover, Me. Elevator	Oct. 16, 1877	448	130	12	640
194,321	Bailey, George C., Pittsburg, Pa. Stop-cock	Aug. 21, 1877	567	170	12	324
186,406	Bailey, Gilbert L., Portland, Me. Cartridge capping and uncapping implement	Jan. 23, 1877	619	189	11	117
188,090	Bailey, Gilbert S., West Pittston, Pa. Book-support	Mar. 6, 1877	123	37	11	397
	Bailey, H. A. (*See* Bailey & Burdick.) (Reissue)					
	Bailey, H. J. (*See* Porteous, John, assignor.)					
197,447	Bailey, Hamilton, Harrisburg, Pa. Dumping-wagon	Nov. 27, 1877	768	229	12	897
188,492	Bailey, Harry J., Pittsburg, Pa. Water-closet	Mar. 20, 1877	544	168	11	468
192,728	Same. Shower-bath apparatus	July 3, 1877	169	49	12	36
191,511	Bailey, James M., Pittsburg, Pa. Coal and ore washer	June 5, 1877	1	1	11	977
187,344	Bailey, James T., Philadelphia, Pa. Top for furniture	Feb. 13, 1877	426	134	11	272
198,068	Bailey, John, and G. Marshall, Belleville, Ill. Riding attachment for plows	Dec. 11, 1877	361	112	12	1008
189,415	Bailey, Leonard, Hartford, Conn. Bench-plane	Apr. 10, 1877	409	129	11	620
196,068	Same. same	Oct. 16, 1877	400	115	12	633
7,968	Bailey, Lestina (widow of H. A. Bailey), and A. R. Burdick, Racine, Wis., assignors to W. H. Field, Port Chester, N. Y. Horse hay-rake	(Reissue) Nov. 27, 1877	1057	317	12	937
194,400	Bailey, Mark, Huddersfield, assignor to J. Batley, London, England. Manufacture of felted shoes, slippers, and other articles	Aug. 21, 1877	637	192	12	333
186,518	Bailey, Mifflin W., Pottstown, Pa. Automatic damper	Jan. 23, 1877	719	221	11	130
	Bailey, Selden A. (*See* Richards, George A., assignor.)					
7,886	Bailey, Thomas H (deceased), B. Wallace, administratrix and assignor to C. E. Blake, San Francisco, Cal. Relief-valve for water-cylinders	(Reissue) Sept. 18, 1877	701	208	12	515
	Bailey, William H. (*See* Hill, Julien S., assignor.)					
7,503	Bailey, William H., New York, N. Y. Pneumatic railway	(Reissue) Feb. 13, 1877	536	165	11	285, 286
187,343	Same. Pipe-coupling	Feb. 13, 1877	425	134	11	272
190,406	Bair, Samuel, Spencerville, Ind. Churn	May 8, 1877	310	91	11	795
187,447	Baird, Daniel W., Lebanon, Tenn. Harrow	Feb. 13, 1877	534	164	11	285
7,859	Baird, David W., Geneva, N. Y. Concealed jointed brace for carriage-tops	(Reissue) Aug. 28, 1877	993	295	12	391
	Baird, George W. (*See* Mullett & Baird.)					
191,823	Baird, John, Lewisville, Ind. Automatic fly-fan	June 12, 1877	309	96	11	1022
194,885	Baites, George E., Lynchburg, Tenn. Corn-planter	Sept. 4, 1877	127	39	12	418
193,470	Baker, Albert J., Jonesville, Mich. Heating-stove	July 24, 1877	951	289	12	166
188,275	Baker, Albert R., Indianapolis, Ind. Mosquito net and canopy	Mar. 13, 1877	317	100	11	429
197,586	Baker, Anson B., Woodhull, Ill. Harrow	Nov. 27, 1877	912	272	12	917
191,637	Baker, Benjamin R., Northfield, Minn. Gate	June 5, 1877	117	36	11	992
196,858	Baker, Charles M., Warwick, N. Y. Guard for door-knob screws	Nov. 6, 1877	124	37	12	778
194,401	Baker, Charles O., Grand Rapids, Wis. Horse-detacher	Aug. 21, 1877	638	192	12	333
	Baker, George F. (*See* Barbour, William, assignor.)					

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
192,962	Baker, George P., assignor of one-half interest to S. B. Thompson, East Aurora, N. Y. Cloth-measuring machine	July 10, 1877	423	127	12	78
186,192	Baker, George W., assignor to White Sewing-Machine Company, Cleveland, Ohio. Lock for drawers, &c.	Jan. 16, 1877	387	118	11	75
188,767	Same.....Sewing-machine	Mar. 27, 1877	814	249	11	514
189,416	Baker, George W., Watsontown, Pa. Adjustable saw-guide	Apr. 10, 1877	410	129	11	620
192,854	Baker, George W., Wilmington, Del. Photographic eye-rest apparatus	July 10, 1877	325	96	12	64
194,067	Baker, George W., and D. Porter, Cleveland, Ohio. Locking-device for drive-wheels for sewing-machines	Aug. 14, 1877	287	85	12	280
195,436	Baker, George W., Cleveland, Ohio. Sewing-machine drive-wheel and shaft-locking device	Sept. 25, 1877	714	211	12	525
186,292	Baker, Henry B, Nelsonville, Ohio. Fly-fan	Jan. 16, 1877	471	145	11	87
190,948	Baker, Henry D., assignor to W. D. Pool, trustee, Lynn, Mass. Step-mechanism for sewing-machines	May 22, 1877	879	261	11	885
	Baker, Henry F., jr. (*See* Taylor & Baker.)					
191,019	Baker, Henry F., Centreville, Ind. Corn and seed planter	May 22, 1877	952	282	11	894
188,720	Baker, Henry O., New York, N. Y. Device for lifting and replacing horse-cars	Mar. 27, 1877	773	237	11	509
192,321	Baker, Henry O., New York, N. Y. Reflector	June 26, 1877	863	261	11	1119
197,811	Baker, Jacob S., New Freedom, Pa. Lift-pump	Dec. 4, 1877	105	32	12	961
	Baker, James, trustee. (*See* Edson, Jacob, assignor.)					
186,407	Baker, John C, Mechanicsburg, Ohio. Grain-drill	Jan. 23, 1877	620	189	11	117
189,679	Same.....Sceding-machine	Apr. 17, 1877	682	211	11	664
186,291	Baker, John G., and T. H. Asbury, assignor to Enterprise Manufacturing Company, Philadelphia, Pa. Sad-iron		470	145	11	86
186,098	Baker, John H., Broadway, and I. P. Baldwin, Manassas, Va. Bee-hive	Jan. 9, 1877	285	86	11	55
192,480	Baker, John S., Norristown, assignor of one-half interest to J. J. McFadden, Philadelphia, Pa. Scroll-sawing machine	June 26, 1877	1007	305	11	1138
190,999	Baker, Jonathan D., Burlington, Vt. Brush-machine	May 22, 1877	929	274, 275	11	891
193,591	Baker, Joseph, Chicago, Ill. Ingot-mold	July 31, 1877	1093	327	12	195
195,327	Baker, Joseph P., Madison, Ga. Guano-distributer	Sept. 18, 1877	596	175	12	500
	Baker, Lewis I. (*See* Root & Baker.)					
195,558	Baker, Lewis I., and L. O. Root, East Minneapolis, Minn. Railway-rail	Sept. 25, 1877	828	246	12	541
194,952	Baker, Loring J., Boston, Mass. Combined cornice and picture-rod molding	Sept. 11, 1877	209	65	12	437
194,637	Baker, Peter H., Virginia City, Nev. Locking-latch	Aug. 28, 1877	873	260	12	375
186,447	Baker, Robert M., Marcellus, N. Y. Wagon-brake	Jan. 23, 1877	661	202	11	122
	Baker, Samuel, *et al.* (*See* Guyer, Hugh, assignor.)					
188,838	Baker, Samuel B., Nelsonville, Ohio. Fire-place	Mar. 27, 1877	899	274	11	525
	Baker, Samuel S., *et al.* (*See* Long, Samuel N., assignor.)					
	Baker, Squire. (*See* Henson & Osborn, assignors.)					
190,181	Baker, Thomas, Albany, N. Y. Draft-regulator	May 1, 1877	71	20	11	755
186,657	Baker, William D., Rockland, Mass. Fire-proof curtain	Jan. 30, 1877	863	267	11	159
	Baker, William E. S. (*See* Lewars & Klaitz, assignors.)					
198,333	Baker, William H., Syracuse, N. Y. Gun-barrel	Dec. 18, 1877	650	198	12	1056
	Baker, William R. (*See* McCormick, Baker & Erpelding.)					
191,096	Baker, William R., assignor to C. H. and L. J. McCormick, Chicago, Ill. Grain-binder	May 22, 1877	1017	303, 304, 305	11	904
189,680	Balat, Antoine A., Couvin, Belgium. Grain-separator	Apr. 17, 1877	684	211	11	664
186,293	Balch, James A., East Portland, Oreg. Tubular gang-saw	Jan. 16, 1877	471	145	11	87
	Balcom, Fred (*See* Brooks & Bearcock, assignors.)					
	Baldwin, Addison H., *et al.* (*See* Sawyer, Frederick A., assignor.)					
	Baldwin, Alex. H. (*See* La France, Peter A., assignor.)					
190,405	Baldwin, Augustin, New York, N. Y., assignor to S. Sheldrake & Co. Cotton-press	May 8, 1877	309	91	11	795
	Baldwin, Charles A. (*See* Weed, Levi S., assignor).					
197,310	Baldwin, Cyrus W., and W. Burdon, Brooklyn, N. Y. Hydraulic hoisting-apparatus	Nov. 20, 1877	612	181	12	864
197,311	Same Hydraulic elevator	Nov. 20, 1877	614	181, 182	12	865
197,199	Baldwin, Frank S., assignor to J. L. Stanage, Saint Louis, Mo. Cryptographic device	Nov. 20, 1877	506	149	12	849
	Baldwin, Horace. (*See* Kronenberg, Edward, assignor.)					
	Baldwin, Isaac P. (*See* Baker & Baldwin.)					
	Baldwin, Joseph A. (*See* Kent & Baldwin.)					
7,872	Baldwin, Joseph F., Chelsea, Mass. Refrigerator-ship (Reissue)	Sept. 4, 1877	200	61	12	427
7,771	Baldwin, Nathan A., Milford, Conn. Attaching sweat-bands to hats (Reissue)	July 3, 1877	261	76	12	47
	Baldwin, Peter. (*See* Mason & Bracket, assignors.)					
190,804	Baldwin, Ranson G., and A. J. Parkhurst, Oskaloosa, Iowa., said Baldwin assignor to said Parkhurst. Washing-machine	May 15, 1877	718	213	11	856
193,682	Same Wringing-machine	July 31, 1877	1190	356	12	208
187,957	Baldwin, Stephen W., Jersey City, N. J. Straightening bars of iron	Mar. 6, 1877	1	1	11	381
195,559	Baldwin, Stephen W., New York, N. Y. Machine for punching metal plates	Sept. 25, 1877	828	246	12	541
193,471	Baldwin, Theursa D., Albion, Mich. Car-coupling	July 24, 1877	952	290	12	166
195,742	Baldwin, Uriah, I. T. and W. K. Shumard, Stewartson, Ill. Seeder and planter	Oct. 2, 1877	52	16	12	568
192,729	Bale, Joseph, and L. Goldberg, London, England. Corset	July 3, 1877	170	49	12	36
	Balkam, Sewall D. (*See* Houghton, Jesse F., assignor.)					
195,077	Ball, Charles A., Wellsville, N. Y. Thill-coupling	Sept. 11, 1877	335	102	12	454
187,746	Ball, Charles E., Philadelphia, Pa. Projectile	Feb. 27, 1877	846	264	11	343
188,331	Ball, Charles H., New York, N. Y. Basket	Mar. 13, 1877	374	117	11	437
	Ball, Clinton, M. (*See* Young, John, assignor.)					
193,392	Ball, George, Springfield, Ill. Hydraulic elevator	July 24, 1877	878	269	12	155
198,445	Ball, John A., Oakland, Cal. Excavator	Dec. 25, 1877	776	235	12	1083
189,174	Ball, Richard, assignor to W. H. Tappey and A. Steel, Petersburg, Va. Cotton-seed planter	Apr. 3, 1877	138	49, 50	11	578
	Ball, Royal, *et al* (*See* Brown, John H., assignor.)					
198,558	Ball, Samuel M., Fanwood, N. J. Machine for separating fur from pelts and hides	Dec. 25, 1877	881	268	12	1098
	Ball, Theophilus C, (*See* Slater & Ball.)					
195,076	Ball, Thomas K., Maysville, Ky. Force-pump	Sept. 11, 1877	331	101	12	454
187,031	Ball, Thomas W., assignor to Winter and Ball, Jersey City, N. J. Umbrella-frame	Feb. 6, 1877	157	52	11	221
194,545	Ball, Thomas W., Jersey City, N. J. Pipe-stem	Aug. 28, 1877	797	237	12	463
191,638	Ballantine, Alexander T., assignor to United States Ice and Refrigerating Company, New York, N. Y. Ice-machine	June 5, 1877	119	37	11	992
189,545	Ballard, Charles P., L. H. Purcell, and J. D. Little, Springfield, Ohio. Grain-separator	Apr. 17, 1877	550	171	11	647
186,519	Ballard, Martin L., Canton, Ohio. Vapor-burner	Jan. 23, 1877	720	222	11	130

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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197,079	Ballou, Hiram P., Needham, assignor to self and I. A. Hatch, Boston, Mass. Machine for knitting over-gaiters, &c.	Nov. 13, 1877	366	107, 108	12	820
195,560	Ballou, Joseph M., Hamilton, Canada. Stone-sawing machine	Sept. 25, 1877	830	246	12	542
	Balston, James N. (*See* Ingersoll, Platt C., assignor.)					
192,963	Baltz, Charles, Chicago, Ill., J. and S. W. Prindle, Sharon, Wis. Manufacture of cheese	July 10, 1877	425		12	79
197,200	Baltzly, Henry H., assignor of one-half interest to R. Peck, Assumption, Ill. Corn-planter	Nov. 20, 1877	507	149	12	849
7,845	Bancroft, John A., assignor to L. F. Bancroft, Worcester, Mass., and A. B. Yetter, New York, N. Y. Street-sprinkler (Reissue)	Aug. 14, 1877	523	158	12	310
	Bancroft, Joseph W., *et al.* (See Wasker, Thomas, assignor.)					
	Bancroft, Lafayette. (*See* Hoak, James, assignor.)					
	Bancroft, Lorey F., *et al.* (*See* Bancroft, John A., assignor) (Reissue.)					
7,877	Bancroft, Lorey F., Worcester, Mass., assignor to self and A. B. Yetter, New York, N. Y. Street-sprinkler	Sept. 11, 1877	462	138	12	473
193,106	Bancroft, William, assignor to Hopedale Machine Company, Hopedale, Mass. Mechanism for operating the rock-shafts of yarn-spoolers	July 17, 1877	580	175	12	106
	Bancroft, William L., *et al.* (*See* Boynton, Nathan S., assignor.)					
	Bancroft, William L., *et al.* (See Lectere, Francis, assignor.)					
188,494	Bandhauer, Robert, Denver, Colo. Compound metal-working machine	Mar. 20, 1877	547	168	11	469
	Bane, Crusam. (*See* West, Thomas J., assignor.)					
187,582	Bane, Seth T., Chatham, Canada. Toe-weight for horseshoes	Feb. 20, 1877	667	207	11	311
193,135	Banfield, Edwin, Jermyn, Pa. Wringer	July 17, 1877	603	182	12	110
197,587	Banfield, Julia D., Boston, Mass. Stocking-supporter	Nov. 27, 1877	912	272	12	918
197,588	Same.....Corset	Nov 27, 1877	913	272, 273	12	918
187,802	Bang, Henri J., New York, N. Y. Disinfecting-compound	Feb. 27, 1877	903		11	350
193,911	Bangs, David E., Boston, Mass. Carbureter	Aug. 7, 1877	109	35	12	250
	Bangs, Isaac S., *et al.* (*See* Philbrick, John W., assignor.)					
197,755	Banister, Isaac, Newark, N. J. Air-tight paint-mixing can	Dec. 4, 1877	53	17	12	953
187,502	Banker, George W., Brooklyn, N. Y. Panel	Feb. 20, 1877	599	185	11	301
196,285	Same.....Vented demijohn-faucet	Oct. 23, 1877	640	186	12	675
187,052	Banks, Charles M., Philadelphia, Pa. Button-hole attachment for sewing-machines	Feb. 6, 1877	157	52	11	224
188,839	Banks, Charles W., Elk Ridge Landing, Md. Musical toy	Mar. 27, 1877	900	274	11	525
191,279	Banks, George W., Hardin County, Tenn. Cotton-chopper	May 29, 1877	1158	347	11	931
193,107	Banks, William L., and W. Coming, Wilmington, Del. Hay-elevator	July 17, 1877	580	175	12	107
195,251	Bankston, John H., assignor to self and T. J. Wells, Pulaski, Tenn. Coffee-roaster	Sept. 18, 1877	530	134	12	490
187,503	Banner, Edward G., London, England. Apparatus for ventilating soil and drain-pipes	Feb. 20, 1877	599	186	11	302
188,493	Banta, George A., New York, N. Y. Refrigerator	Mar. 20, 1877	547	168	11	469
187,345	Banta, George C., Kansas City, Mo. Carpet-stretcher	Feb. 13, 1877	426	134	11	272
	Baragwanath, Henry, *et al* (*See* Van Horn, Abner, assignor.)					
	Same.....(*See* Van Horn, Andrew, assignor.)					
188,768	Barbarin, Arthur, New Orleans, La. Bale-tie	Mar. 27, 1877	816	250	11	515
	Barber, Amaziah D., jr. (*See* Palmer & Barber.)					
	Same.....(*See* Palmer, Augustus H., assignor.)					
187,083	Barber, Charles, Meaford, Canada. Turbine water-wheel	Feb. 6, 1877	159	53	11	224
192,481	Barber, Charles E., and G. A. Porter, assignors to Porter Manufacturing Company (limited), Syracuse, and Whitman & Burrell, Little Falls, N. Y. Steam-boiler	June 26, 1877	1008	305	11	1138
195,252	Barber, Charles W., and G. Lenox, Lindleytown, N. Y. Ironing-table	Sept. 18, 1877	531	155	12	490
	Barber, Clark J. (*See* Barber, Henry B. and C. J.)					
195,877	Barber, Daniel F., Newton, Mass. Countersink	Oct. 9, 1877	194	55	12	597
	Barber, David D., *et al.* (*See* Wells, Isaac, assignor.)					
188,565	Barber, Fernando C., Oxford, Mich. Elevator-bucket	Mar. 20, 1877	609	189	11	478
195,472	Barber, Henry B. and C. J., Scott, N. Y. Treadle-motion	Sept. 25, 1877	751	221	12	530
198,069	Barber, Ira, La Porte, Ind. Cultivator	Dec. 11, 1877	362	112	12	1008
195,431	Barber, Jesse B., Cresco, Iowa. Device for tightening fence-wire	Sept. 18, 1877	697	206	12	515
7,860	Barber, Lyman L., Boston, Mass. Cutting-attachment for sewing-machines (Reissue)	Aug. 28, 1877	994	295	12	391
187,583	Barber, Nathan E., assignor to A. Holmes, Saint Louis, Mich. Extension-table slide	Feb. 20, 1877	668	208	11	311
	Barber, R. S., *et al.* (*See* Van Brunt, George W., assignor) (Reissue.)					
198,263	Barber, Thurston B., Baltic, Conn. Windlass water elevator	Dec. 18, 1877	594		12	1047
193,182	Barber, William H., Allentown, Pa. Bark-mill	May 1, 1877	72	20	11	756
195,914	Barber, William J., Covington, Ind. Eave-trough machine	Oct. 9, 1877	233	66	12	602
	Barbour, Gearge H. (*See* Dwyer & Barbour.)					
197,005	Barbour, William, Reading assignor to G. F. Baker, Hyannis, Mass. Metallic brush	Nov. 13, 1877	285	84	12	809
188,092	Barclay, Thomas C., Boston, Mass. Bustle	Mar. 6, 1877	125	37	11	397
197,239	Barclay, William P., Virginia City, Nev. Hydraulic and wire-rope pumping-system	Nov. 20, 1877	545	161	12	855
193,070	Bardell, H. Webster, Tunkhannock, Pa. Hand stamp	July 19, 1877	532	161	12	101
188,093	Barff, Frederick S., Kilburn, England. Preserving animal and vegetable substances	Mar. 6, 1877	125		11	397
191,097	Barger, James V., Rockport, Mo. Grasshopper-destroyer	May 22, 1877	1021	305	11	904
	Barghausen, Herman. (*See* Laubach, Barghausen & Ries.)					
197,589	Bargmann, Lorenz, Saint Louis, Mo. Utilizing water-power in sewers	Nov. 27, 1877	915	273	12	918
196,621	Barion, August, San Francisco, Cal. Napkin-holder	Oct. 30, 1877	984	287	12	735
191,095	Barker, Albert S., and H. J. Shill, jr., Philadelphia, Pa. Car-window	May 22, 1877	1017	303		903
193,592	Barker, Arthur W., Girard, Kans. Cloth-measuring machine	July 31, 1877	1094	327, 328	12	195
197,537	Barker, Asbury, Peekskill, N. Y. Molders' flask	Nov. 27, 1877	864	257	12	911
	Barker, George F. (*See* Genth & Barker.)					
186,525	Barker, John A., Wilmington, N. C. Bee-hive	Jan. 23, 1877	727	224	11	131
186,920	Barker, John F., Springfield, Mass. Gas-burner	Feb. 6, 1877	2	1	11	203
187,958	Barker, Joseph, Chicago, Ill. Middlings-separator	Mar. 6, 1877	2	1	11	381
198,181	Barker, Laura B., Springfield, Mass. Attachment for casters	Dec. 18, 1877	496	154	12	1033
191,395	Barker, Robert F., Providence, R. I., assignor of five-eighths interest to G. P. Loring, T. Voelcker, Boston, Mass., and H. A. Stearns, Pawtucket, R. I. Carding-engine	May 29, 1877	1307	396	11	951
186,193	Barker, Silas, Hartford, Conn., assignor to T. D. Hotchkiss, West Meriden, Conn. Molasses-gate	Jan. 16, 1877	388	118	11	75
194,638	Barker, William C., Horseheads, N. Y. Machine for boring pump-logs	Aug. 28, 1877	874	261	12	375
194,639	Same.....Pump stock and plunger	Aug. 28, 1877	875	260	12	375
194,640	Same.....Chain-pump bucket	Aug. 28, 1877	876	260	12	375
192,406	Barlow, Charles, assignor to Miller, Barlow & Co., Cookshire, Canada. Automatic cradle	June 26, 1877	947	283	11	1129
197,238	Barlow, Cornelius, Sharpsville, Ind Stump-extractor	Nov. 20, 1877	544	161	12	854
198,264	Barlow, Elisha T., San Francisco, Cal. Screw-wrench	Dec. 18, 1877	595	180	12	1047
192,215	Barlow, James R., assignor of one-half interest to B. R. Smith, Howell, Mich. Bobbin-holder	June 19, 1877	721	220	11	1088

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
192,482	Barlow, John W., Lawrence, Mass. Loom-picker	June 26, 1877	1010	306	11	1138
186,194	Barlow, William A., Chicago, Ill. Attaching knob-roses to doors	Jan. 16, 1877	388	118	11	75
187,698	Same.....Door-latch	Feb. 27, 1877	799	248	11	337
189,012	Same.....Attaching knobs to their shanks	Apr. 3, 1877	4	2	11	559
189,013	Same.....Knob-latch	Apr. 3, 1877	5	2	11	559
	Barnard & Leas Manufacturing Company. (*See* Barnard, Heman A., assignor.)					
186,522	Barnard, Charles F., Victoria, British Columbia. Stamping dental plates	Jan. 23, 1877	723	222 223	11	131
195,473	Barnard, Charles S., assignor of one-half interest to J. A. Thomas, West Meriden, Conn. Bottle-stopper	Sept. 25, 1877	751	222	12	530
197,590	Barnard, Heman A., assignor to Barnard & Leas Manufacturing Company, Moline, Ill. Sack-packer	Nov. 27, 1877	916	273	12	918
189,417	Barnard, Henry H., assignor of one-half interest to H. S. Miller, Rochester, N. Y. Shot-cartridge	Apr. 10, 1877	411	130	11	620
196,859	Barnard, Royal W., Fayette, Iowa. Butter-worker	Nov. 6, 1877	124	38	12	778
198,334	Same.....Purifying rancid butter	Dec. 18, 1877	651		12	1056
186,974	Barnard, William S., Canton, Ill. Book-support	Feb. 6, 1877	58	20	11	209
	Barnebee, Stephen H. (*See* Potter & Barnebee.)					
195,329	Barnekoo, Kiel V., Newburg, N. Y. Piano	Sept. 18, 1877	599	176	12	500
	Barnes, Alden. (*See* Bering & Barnes.)					
7,521	Barnes, Alden, Bloomington, Ill., assignor of one-half interest to M. Barnes. Corn-planter (Reissue)	Feb. 20, 1877	782	243	11	326
7,522	Same.....same (Reissue)	Feb. 20, 1877	785	243	11	326
197,312	Barnes, Chauncey, South Orange, N. J. Hammock	Nov. 20, 1877	615	182	12	865
197,958	Barnes, Daniel A., New York, N. Y. Sad-iron	Dec. 11, 1877	258	79	12	992
	Barnes, David P., *et al.* (*See* Monteith, Robert H., assignor.)					
186,099	Barnes, Elbridge F., New Haven, Conn. Pipe tongs and cutter	Jan. 9, 1877	287	86	11	55
186,520	Barnes, Elmore A., Pittsburg, Pa. Scoop	Jan. 23, 1877	722	222	11	131
186,521	Same.....same	Jan. 23, 1877	722	222	11	131
195,253	Barnes, Emory, Mount Pleasant, Mich. Lift-pump	Sept. 18, 1877	532	155	12	490
192,407	Barnes, Frank, Fairmount, Nebr. Harrow	June 26, 1877	948	284	11	1129
195,474	Barnes, Henry D, Fair Haven, Conn. Seal-lock	Sept. 25, 1877	752	222	12	530
193,211	Barnes, Jerome B., Indianapolis, Ind. Car-replacer	July 17, 1877	674	205	12	120
	Barnes, John. (*See* Barnes, William F. and J.)					
188,276	Barnes, Joshua, Brooklyn, N. Y. Combined shawl-pin and button-hook	Mar. 13, 1877	318	100	11	429
	Barnes, Lovick P. (*See* Burridge & Barnes.)					
191,558	Barnes, Matthias H., Chicago, Ill. Coal-oil stove	June 5, 1877	48	14	11	983
	Barnes, Monroe. (*See* Barnes, Alden, assignor) (Reissue.)					
	Same..... (*See* Bering & Barnes.)					
	Barnes, W., *et al.* (*See* Kistner, Calvin, assignor.)					
	Barnes, W. G., *et al.* (*See* Kistner, Calvin, assignor.)					
191,913	Barnes, Walter G., Freeport, Ill. Barbed hoop-iron fence-strip	June 12, 1877	391	121	11	1033
193,912	Same.....Corn-cultivator	Aug. 7, 1877	110	35	12	250
195,328	Same.....Horse hay-rake	Sept. 18, 1877	597	176	12	500
188,566	Barnes, William A., Goodwin's Corner, Ind. Combined flour-chest and bread-table	Mar. 20, 1877	610	189	11	478
189,681	Barnes, William F. and J., Rockford, Ill. Sawing-machine	Apr. 17, 1877	685	211 212	11	664
198,070	Barnes, Wilson, Maquoketa, Iowa. Corn-stalk cutter	Dec. 11, 1877	363	113	12	1008
190,730	Barnett, Frank, Keokuk, Iowa. Flying-machine	May 15, 1877	659	195	11	847
	Barnett, George, *et al.* (*See* Jowitt, James, assignor.)					
	Barnett, Henry, *et al.* (*See* Jowitt, James, assignor.)					
188,332	Barnett, John M., Lynn, Mass. Shears for cutting sheet metal	Mar. 13, 1877	374	117	11	437
196,324	Barnett, Samuel M., New York, N. Y. Exercising-device	Oct. 23, 1877	682	197	12	681
187,584	Barney, Everett H., Springfield, Mass. Skate-fastening	Feb. 20, 1877	668	208	11	311
	Barney, Martin V. (*See* Hodgins, Samuel, assignor.)					
	Barnhart, Arthur M., *et al.* (*See* Fuchs, Henry, assignor.)					
	Barnhart, Alson E., *et al* (*See* Fuchs, Henry, assignor.)					
193,683	Barnhart, George J., Charlottesville, Va. Attachment to fence-posts	July 31, 1877	1191	356	12	208
	Barnhart, George W., *et al.* (*See* Fuchs, Henry, assignor.)					
194,402	Barns, William H., New London, Conn. Service-box for the shut-off cocks of gas and water pipes	Aug. 21, 1877	639	192	12	333
192,557	Barnum, Ashbell, Green Island, N. Y., assignor, by mesne assignments, to E. E. Rice, Washington, D. C. Ventilator	July 3, 1877	1	1	12	13
188,840	Barnum, Russell S., assignor to H. C. Goodrich, Chicago, Ill. Hinged slate	Mar. 27, 1877	901	274	11	526
	Baron, Alfred L. (*See* Cash & Baron.)					
190,537	Baron, Charles S. S., Bellaire, Ohio. Securing handles to cups	May 8, 1877	439	129	11	811
189,989	Barr, Francis A., Hester, Mo. Sewing-machine clutch	Apr. 24, 1877	1009	309	11	715
195,330	Barr, John, Bridgeport, Conn. Car-spring	Sept. 18, 1877	600	177	12	500
186,533	Barr, William H., assignor to self and H. P. Pears, Pittsburg, Pa. Alarm and registering punch	Jan. 23, 1877	725	223	11	131
196,325	Barrenther, Henry, Winsted, Conn. Attachment for violins	Oct. 23, 1877	683	197	12	681
191,747	Barrett, Charles F., New York, N. Y. Feed-water heater	June 12, 1877	233	73	11	1013
194,143	Barrett, Daniel, and J. F. Quinn, Wilmington, Ill., assignors to said Quinn. Gate	June 19, 1877	642	198	11	1078
197,756	Barrett, Edward D., assignor of one-half interest to J. B. Savage, Southington, Conn. Pipe wrench or tongs	Dec. 4, 1877	51	18	12	953
193,313	Barrett, Emery D., assignor to self and W. M. Barrett, Spring Lake, Mich. Presser-bar for planing-machines	July 24, 1877	885	247	12	145
	Barrett, Philander. (*See* Spencer & Barrett.)					
188,091	Barrett, Richard W., Ely, Vt., assignor to self, S. and J. C. Ely, New York, N. Y. Railway-switch	Mar. 6, 1877	124	37	11	397
186,973	Barrett, Silas M., Cincinnati, Ohio. Chair-seat	Feb. 6, 1877	57	20	11	209
187,346	Same.....Broom and brush	Feb. 13, 1877	427	131	11	272
	Barrett, William M. (*See* Barrett, Emery D., assignor.)					
195,331	Barrie, Samuel S., New York, N. Y. Attaching lamps, &c., to their supports	Sept. 18, 1877	601	177	12	501
	Barrow, David. (*See* Barrow, Samuel and D.)					
192,216	Barrow, Jacob F., and J. Solter, Baltimore, Md., assignors to the American Machine Company, Philadelphia, Pa. Plaiting-machine	June 19, 1877	721	221	11	1088
193,844	Barrow, Samuel and D., Windfall, Ind. Lifting-jack	Aug. 7, 1877	45	15	12	241
198,483	Barrow, Thomas E., assignor of one-half interest to J. Ettinger, Mansfield, Ohio. Indicator for time, railway, and other purposes	Dec. 25, 1877	813	247	12	1088
	Barrows Savery Company (limited). (*See* Burr, John I., assignor.)					
191,297	Barry, Andrew F., and I. G. Lane, New York, N. Y. Chimney-cowl	May 29, 1877	1210	369	11	940
	Barry, Homer. (*See* Fisher, George L., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
192,890	Barry, James, New York, N. Y. Toy pistol	July 10, 1877	358	105	12	69
197,080	Barse, Mills W., and H. W. Moore, Olean, N. Y. Drill-cable measure	Nov. 13, 1877	368	108	12	821
188,038	Barstow, Amos C., Providence, R. I. Stove-grate	Mar. 6, 1877	85	24	11	391
189,682	Bartels, William H., Elgin, assignor of one-half interest to G. T. Hunsaker, Carthage, Ill. Oil-can	Apr. 17, 1877	687	212	11	664
193,212	Bartels, William H., assignor of one-half interest to W. R. Eaton, Elgin, Ill. Oil-can.	July 17, 1877	675	206	12	120
	Barth, Sebastian C. (*See* Beaver & Abbott, assignors.)					
190,805	Barthel, Albrecht E., Detroit, Mich. Grate-bar	May 15, 1877	719	213	11	856
191,098	Same.....Car sleeping-berth	May 22, 1877	1022	305 306	11	904
	Bartholomew, Caleb. (*See* Avery & Bartholomew.)					
	Bartholomew, Caleb, *et al.* (*See* Colby, Ellery C., assignor.)					
187,347	Bartlett, Charles, and E. C. Lewis, assignors to G. F. Leete, Providence, R. I. Ice-creeper	Feb. 13, 1877	429	135	11	272
	Bartlett, David L., *et al.* (*See* McAvoy, Hugh L., assignor) (Reissue.)					
	Bartlett, Edward F. (*See* Kissam, George F., assignor.)					
198,335	Bartlett, Francis C., assignor to J. M. Shedd and W. Peacock, New York, N. Y. Bed-bottom	Dec. 18, 1877	652	198	12	1056
192,855	Bartlett, Frank L., and W. I. Bickford, Portland, Me. Show-case	July 10, 1877	326	96	12	64
	Bartlett, H. L., *et al.* (*See* Murphy, Daniel, assignor.)					
187,245	Bartlett, John W., assignor to self and M. Witherell, Moline, Ill. Soap-composition	Feb. 13, 1877	329		11	259
185,883	Bartlett, Joseph J., New York, N. Y. Battening for roofs	Jan. 2, 1877	67	21	11	17
194,068	Bartlett, Melzar A., Worcester, Mass. Awl-haft	Aug. 14, 1877	288	86	12	280
	Bartlett, Pliny. (*See* Scoville & Bartlett.)					
190,806	Barton, Arthur, Nevada City, Cal. Horseshoe	May 15, 1877	721	213	11	856
186,705	Barton, Elijah C., assignor to Gong Bell Manufacturing Company, Easthampton, Mass. Bell-toy	Jan. 30, 1877	906	280	11	165
	Barton, Richard. (*See* Barton, William B. and R.)					
196,553	Barton, William B. and R., New York, N. Y. Cigar-machine	Oct. 30, 1877	926	268	12	726
186,524	Barton, William R., Georgetown, Mass. Welt-trimmer	Jan. 23, 1877	726	224	11	131
195,743	Barton, William S., Orangeburg, S. C. Seed-planter	Oct. 2, 1877	54	16	12	568
194,886	Bartram, Eli S., New Orleans, La. Tailors' chalk-holder	Sept. 4, 1877	127	39	12	418
192,558	Barwolff, Otto, Berlin, Prussia. Ornamenting wooden surfaces	July 3, 1877	2	1	12	13
197,812	Basiger, John R., and G. W. Feely, Harrisonville, Mo. Hame-fastener	Dec. 4, 1877	106	33	12	961
197,081	Baskin, William C., Hammond, Ill. Car-coupling	Nov. 13, 1877	368	108	12	821
198,265	Bass, Thomas G., Pittsburg, Tex. Single-tree	Dec. 18, 1877	596	180	12	1047
189,683	Bassemir, John, Brooklyn, N. Y. Gas-regulator	Apr. 17, 1877	688	212	11	664
197,240	Bassett, George, Chicago, Ill. Ornamental glass panel	Nov. 20, 1877	546	161	12	855
	Bassett, George A., trustee. (*See* Hay, Bushrod C., assignor.)					
	Bassett, George T. (*See* Reynolds, John W., assignor.)					
191,639	Bassett, H. Williams, Wallingford, Conn., assignor to Hall, Elton, & Co. Die for spoon-blanks	June 5, 1877	121	37	11	492
197,006	Bassett, John M., Athens, Ga. Plow	Nov. 5, 1877	286	85	12	809
	Bassett, Royal M., *et al.* (*See* Clemens, Frederick M., assignor.)					
	Bassett, Theodore S., *et al.* (*See* Clemens, Frederick M., assignor.)					
186,526	Batchelder, John A., Salem, Mass. Button-gaiter-boot	Jan. 23, 1877	728	224	11	131
191,824	Batchelder, William J. M., Honey Creek, Ind. Lifting-jack	June 12, 1877	310	96	11	1022
192,961	Batchelder, William W., New York, N. Y. Portable percussion-torch for lighting gas	July 10, 1877	425	127	12	79
	Batchelor, George W., *et al.* (*See* Devling, James W., assignor.)					
188,567	Bate, John J., Brooklyn, N. Y., assignor to Bate Refrigerating Company. Refrigerator	Mar. 20, 1877	610	189	11	478
189,990	Bate, John J., Brooklyn, N. Y. Refrigerator	Apr. 24, 1877	1010	309	11	715
197,311	Bate, John J., Brooklyn, N. Y. Preserving meats during transportation and storage	Nov. 20, 1877	617	182	12	866
	Bate Refrigerating Company. (*See* Bate, John J., assignor.)					
192,892	Bateman, Charles S., Battle Creek, Mich. Dumping-wagon	July 10, 1877	359	106	12	69
197,959	Bates, Charles E., West Cheshire, Conn. Buttons and button-fastening	Dec. 11, 1877	259	80	12	992
	Bates, Edward C. (*See* Hall, Charles C., assignor.)					
	Same.....(*See* Mathews, David P., assignor) (Reissue.)					
189,813	Bates, Emory H., Washington, D. C. Bracket	Apr. 24, 1877	859	263	11	695
189,297	Bates, George, Cohasset, Mass. Sectional life-boat	Apr. 10, 1877	294	93	11	60
7,552	Bates, John C., Cold Spring, N. Y. Ventilator (Reissue)	Mar. 13, 1877	505	156	11	455
189,913	Bates, John H., Nanticoke, Pa. Folding boat	Apr. 24, 1877	940	287	11	705
	Bates, Joseph L. (*See* Rice, Matthias J., assignor.)					
197,313	Bates, Loring, Cohasset, Mass. Seine for fishing	Nov. 20, 1877	616	182	12	865
195,475	Bates, Samuel A., assignor to self, J. J. McCormick, and R. Lidell, Pittsburg, Pa. Barrel-hoisting apparatus	Sept. 25, 1877	753	222	12	530
198,336	Bates, Samuel D., Lewisburg, Pa. Horse hay-rake	Dec. 18, 1877	652	198	12	1056
	Bathrick, Lewis E. (*See* Parks & Bathrick.)					
	Batley, John. (*See* Bailey, Mark, assignor.)					
	Same.....(*See* Keats & Clark, assignors) (Reissue.)					
189,418	Batley, John, Kensington, J. Keats, Wood Green, and J. Neil, Worship street, England. Last for boots and shoes	Apr. 10, 1877	412	130	11	620
195,678	Batley, John, J. Keats, and J. Neil, Middlesex County, England. Manufacture of felted articles	Sept. 11, 1877	336	102	12	454
198,266	Batley, John, Philadelphia, Pa. Traction-locomotive	Dec. 18, 1877	597	180	12	1047
192,408	Batt, Henry, Loudon, England, assignor to L. G. Tabraham, Boston, Mass. Shoe for scaffoldings	June 26, 1877	949	284	11	1129
192,891	Same.....Hoisting-machine	July 10, 1877	358	106	12	69
	Battis, Martin T. (*See* Morse, John F., assignor.)					
	Batty, Albert. (*See* Batty, Job, assignor.)					
188,495	Batty, Job, Philadelphia, Pa., assignor to A. Batty, Philadelphia, Pa. arrangement of lapping-machines	Mar. 20, 1877	548	168 169	11	469
189,331	Baudelot, Francois V., Harancourt, near Sedan, France. Cooler for beer, ale, &c	Apr. 10, 1877	332	106	11	610
189,332	Same.....Beer-cooler	Apr. 10, 1877	333	106	11	610
193,472	Bauder, Silas E., Birmingham, Ohio. Caster for furniture	July 24, 1877	953	290	12	166
195,332	Bauer, Zachaeus, Saint Louis, Mo. Apparatus for drafting patterns for dresses and coats	Sept. 18, 1877	602	177	12	501
195,971	Baugh, John B., Detroit, Mich. Draw-bar for railway-cars	Oct. 9, 1877	294	82	12	610
7,683	Baum, John C., Cincinnati, Ohio. Smoke-consuming furnace (Reissue)	May 15, 1877	868	257	11	875
197,201	Baum, John E., Freeland, Pa. Corkscrew	Nov. 20, 1877	508	149	12	849
197,538	Baum, William T., and A. Shidel, Franklin, Pa. Apparatus for and process of extracting casings from oil and other wells	Nov. 27, 1877	865	257	12	911
198,531	Baur, Franz, and A. Grom, Allegheny, Pa. Burial case	Dec. 25, 1877	858	261	12	1094
	Bausch, John J., *et al.* (*See* Gundlach, Ernst, assignor.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Baush, Christian H. (*See* Springhorn and Baush.)					
189,175	Baxter, Charles H., and H. Horrocks, Fall River, Mass. Soap composition	Apr. 3, 1877	139		11	578
	Baxter, Whitfield W. (*See* Gordon & Baxter.)					
188,841	Baxter, William, jr., Newark, N. J. Automatic toy	Mar. 27, 1877	901	274	11	526
	Bay City Iron Company. (*See* Hall, Chancy M., assignor.)					
193,213	Bayle, Honoré, New York, N. Y. Composition for molded articles	July 17, 1877	676		12	120
190,807	Bayley, Alfred, Newark, N. J. Handles for tea and coffee pots	May 15, 1877	721	214	11	856
190,731	Bayley, William, Wilmington, Del., assignor to E. and B. Holmes, Buffalo, N. Y. Barrel-trussing machine	May 15, 1877	660	195	11	847
	Baylis, James. (*See* Dion, Charles, assignor.)					
186,975	Bayliss, Benjamin, Pittsburg, Pa. Furnace and process for manufacturing iron and steel	Feb. 6, 1877	59	20	11	209
	Bayliss, Edwin, *et al.* (*See* Brown, James O., assignor.)					
	Bayliss, Edwin. (*See* Lomont & Brown, assignors.)					
195,561	Bazzoni, Lewis J., Newburg, N. Y. Spring-seat for wagons	Sept. 25, 1877	831	247	12	542
	Beach, Clifton B. (*See* Woodford, Charles W., assignor) (Reissue.)					
191,298	Beach, Edgar B., West Meriden, Conn. Animal-trap	May 29, 1877	1230	370	11	940
	Beach, Elias, *et al.* (*See* Miller, Cassius M., assignor.)					
194,122	Beach, Henry B, West Meriden, Conn. Drill-chuck	Aug. 14, 1877	361	107	12	289
190,809	Beach, Henry H., Rome, N. Y., assignor to W. H. Smith, Urbana, Ill. Apparatus for curing grain	May 15, 1877	723	214	11	856
190,810	Same.....same	May 15, 1877	724	214	11	856
189,596	Beachman, Robert, Lyons, N. Y. Cast-iron exterior coffin or vault	Apr. 17, 1877	603	186	11	653
197,315	Beadle, George, Syracuse, N. Y. Fare-box	Nov. 20, 1877	618	183	12	866
197,316	Same.....Cash-drawer for street-cars	Nov. 20, 1877	619	183	12	866
196,181	Beal, Daniel W., Rockland, Mass. Lock-hinge for window-blinds	Oct. 16, 1877	521	151	12	650
195,080	Beal, Ezra F., Poland, assignor of one-half interest to T. B. Swan, Minot, Me. Combined baking rim and vessel	Sept. 11, 1877	339	102	12	454
197,448	Beal, Francis R., and S. Clark, assignors to Michigon School Furniture Company, Northville, Mich. Colter or jointer-arms for plows	Nov. 27, 1877	769	229	12	897
195,079	Beall, John T., assignor to self and W. H. Wheary, Petersburg, Va. Spindle, bolster, and step for spinning-machines	Sept. 11, 1877	337	102	12	454
	Beals, William L (*See* Bull, Daniel, assignor.)					
194,983	Beam, Daniel A., Newark, N. J. Weighing attachment for hand-trucks	Sept. 11, 1877	239	73	12	440
192,965	Beam, Stephen R., Bedford, Mich. Portable fence-post	July 10, 1877	427	128	12	79
188,568	Beaman, John P., San Francisco, Cal. Attachment for invalid-bedsteads	Mar. 20, 1877	611	189	11	478
189,176	Beamer, Philip, Duncansville, Pa. Machine for trussing barrels	Apr. 3, 1877	139	50	11	578
186,296	Bean, Albert B., assignor to D. Frisbie, New Haven, Conn. Clutch	Jan. 16, 1877	473	146	11	87
186,784	Bean, Joseph H., Cincinnati, Ohio. Gasoline-burner	Jan. 30, 1877	977	304	11	175
192,633	Bean, Nehemiah S., Manchester, N. H. Pump-valve	July 3, 1877	79	23	12	23
197,082	Bean, Roscoe, Hudson, Mich. Double-acting pump	Nov. 13, 1877	369	{108 109}	12	821
188,333	Bean, Samuel L., Philadelphia, Pa. Middlings-separator	Mar. 13, 1877	374	117	11	437
198,559	Bear, Charles H., Manchester, Pa. Hitching device	Dec. 25, 1877	882	269	12	1098
192,856	Bear, Simeon J. M., Mitchell, Iowa. Telegraphic circuit	July 10, 1877	327	96	12	64
	Bearcock, Thomas W. (*See* Brooks & Bearcock.)					
195,562	Bearcock, Thomas W., Pittston, Pa Revolving fire-arm	Sept. 25, 1877	831	247	12	542
	Beard & Bro. (*See* King, Phineas F., assignor) (Reissue.)					
	Beard, A. N. (*See* Ransom, Newman A., assignor.)					
	Beard, Eleazer J., *et al.* (*See* King, Phineas F., assignor.)					
	Beard, George N., *et al.* (*See* King, Phineas F., assignor.)					
195,437	Beard, Horace, Wilton, N. H. Vehicle-body	Sept. 25, 1877	715	211	12	525
196,554	Beard, Horace, Wilton, N. H. Anti-rattling spring for thill-couplings	Oct. 30, 1877	928	263	12	726
197,813	Beard, Johnson H., Providence, Ky. Guide for sashes and doors	Dec. 4, 1877	106	33	12	961
190,538	Beard, Mathew M., and G. W. Purcell, Black Hawk, Miss. Plow	May 8, 1877	440	129	11	811
192,217	Beard, Matthew M., Canton, Miss. Gin-saw-filing machine	June 19, 1877	722	221	11	1089
	Beard, William, *et al.* (*See* Neville, George W., assignor.)					
196,860	Beardslee, Marcus D., Saint Louis, Mo. Apparatus for scouring and polishing grain	Nov. 6, 1877	126	38	12	778
192,966	Beardsley, Anson L., Fairport, N. Y. Latch for gates and doors	July 10, 1877	428	128	12	79
	Beardsley, M. W. (*See* Thorn, Joseph W., assignor.)					
189,177	Beasley, Charles J., assignor to William H. Tappey and A. Steel, Petersburg, Va. Cotton-press	April 3, 1877	140	50	11	578
196,861	Beattie, William, Portage, Wis. Plate-lifter	Nov. 6, 1877	127	38	12	779
192,857	Beattie, William G., London, England. Axle-box	July 10, 1877	327	97	12	65
	Beatty, George. (*See* Zimmerman & Beatty.)					
197,241	Beatty, John P., Norwalk, Conn. Straw hat	Nov. 20, 1877	547	161	12	855
186,295	Beatty, Thomas C., Newark, N. J. Machine for washing hat-bodies	Jan. 16, 1877	473	145	11	87
195,333	Beaudet, Homer J., Green Point, N. Y. Convertible chair and cradle	Sept. 18, 1877	604	177	12	501
193,633	Beaudet, John, Cambridgeport, Mass. Hinge	July 31, 1877	1136	340	12	201
194,571	Beaudette, Agide J. and L. L., Fond du Lac, Wis. Kettle-cover	Aug. 28, 1877	820	244	12	367
	Beaudette, Louise L (*See* Beaudette, Agile J. and L. L.)					
198,267	Beaumont, Cornelia E., Cleveland, Ohio. Life-boat	Dec. 18, 1877	598	181	12	1047
192,893	Beaumont, David G., Austin, Tex. Postage and revenue stamps	July 10, 1877	360	106	12	69
190,808	Beaumont, Duncan, Sacramento, Cal. Ore-washer	May 15, 1877	722	214	11	856
186,073	Beauperland, Joseph O., Fall River, Mass. Washing-machine	Jan. 9, 1877	262	79	11	52
198,504	Same.....same	Dec. 25, 1877	835	{253 254}	{12}	1000
7,669	Beauregard, G. T., New Orleans, La. Machinery for propelling cars (Reissue)	May 8, 1877	578	172	11	839
197,591	Beauregard, John H., and J. Wroath, assignors of one-third interest to J. McCarty, Sandy Hill, N. Y. Cover for pots and kettles	Nov. 27, 1877	917	274	12	918
196,516	Beauregard, Napoleon, assignor of one-half interest to B. P. Brunner, San Francisco, Cal. Disengaging clutch-coupling for shafting	Oct. 30, 1877	889	257	12	721
191,396	Beausoleil, Alfred, Alpena, Mich. Cheese-cutter	May 29, 1877	1308	397	11	951
191,914	Same.....Twine-holder	June 12, 1877	391	{121 122}	{11}	1033
187,084	Beaver, George A., and E. O. Abbott, assignors to S. C. Barth, Indianapolis, Ind. Trace-detaching device	Feb. 6 1877	160	53	11	221
196,622	Beaver, Lewis T., Placerville, Cal. Car-coupling	Oct. 30, 1877	985	287	12	735
	Beccul, Abram. (*See* Bowen, John T., assignor.)					
196,862	Bechtold, Julius, Brooklyn, N. Y. Fireman's helmet and dress	Nov. 6, 1877	127	39	12	779
190,184	Beck, August, assignor to L. and J. Dryfoos, New York, N. Y. Quilting-machine	May 1, 1877	73	20	11	756
196,863	Beck, August, assignor to L. Dryfoos, New York, N. Y. Quilting-machine	Nov. 6, 1877	128	39	12	779

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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196,776	Beck, Bernard J., Brooklyn, N. Y. Album	Nov. 6, 1877	38	11	12	766
186,976	Beck, George, Charlotte, N. Y. Vehicle-shaft coupling	Feb. 6, 1877	61	20	11	210
191,640	Beck, Jacob P., assignor of part interest to G. Kintzing and C. V. Richards, Lock Haven, Pa. Sand-papering machine	June 5, 1877	122	37	11	992
187,348	Beck, Robert M., assignor to Taylor Manufacturing Company, Westminster, England. Mounting for portable engines	Feb. 13, 1877	429	125	11	272, 273
192,409	Beck, Robert M., assignor to Taylor Manufacturing Company, Westminster, Md. Piston	June 26, 1877	949	284	11	1130
187,246	Beck, Washington, Pittsburg, Pa. Pressed glass door-block	Feb. 13, 1877	329	105	11	259
196,326	Same.....Mold for the manufacture of tubular or hollow articles of glassware	Oct. 23, 1877	684	197	12	681
187,803	Becker, E. John M., New York, N. Y. Kerosene-burner	Feb. 27, 1877	903	280	11	350
187,959	Same.....Fountain-lamp	Mar. 6, 1877	3	1	11	381
197,009	Becker, Frederick J., Hokah, Minn. Window-shade	Nov. 13, 1877	289	85	12	809
7,486	Becker, Henry P., assignor of one-half interest to N. Underwood, Dixon, Ill, Machine for scouring and polishing grain (Reissue)	Feb. 6, 1877	274	90	11	239
197,814	Becker, Jacob M., Oakfield, Mich. Beehive	Dec. 4, 1877	107	33	12	961
197,007	Becker, Johann P., jr., Remscheid, Germany. Skate	Nov. 13, 1877	287	85	12	809
197,008	Same.....same	Nov. 13, 1877	288	85	12	809
192,218	Becker, Leander, York, Pa. Feed-cutter	June 19, 1877	724	221	11	1089
188,769	Beckers, Alexander, New York, N. Y. Stereoscope	Mar. 27, 1877	816	250	11	515
195,972	Beckford, Lewis C, Mount Etna, Ind. Gate	Oct. 9, 1877	294	82	12	610
193,136	Beckley, Washington, assignor to self, D. W. and M. F. Garred, Louisa, Ky. Balloon	July 17, 1877	604	182	12	110
197,815	Beckwith, Frank W., Flint, Mich. Trace-fastening	Dec. 4, 1877	108	33	12	961
195,081	Beddow, George, Detroit, Mich. Self-feeding stove	Sept. 11, 1877	339	103	12	455
	Bedell, Edwin F. (*See* Bond, Virgil A., assignor.)					
	Bedell, Edwin W. (*See* Case & Bedell.)					
193,845	Bedell, William and W. S., New York, N. Y. Gas-burner	Aug. 7, 1877	45	15	12	241
	Bedell, Winfield S. (*See* Bedell, William and W. S.)					
197,317	Bedford, Simeon, Newark, N. J. Drawing-knife	Nov. 20, 1877	620	183	12	866
192,410	Bedwell, Benjamin F., Overton, Mo. Portable corn-crib	June 26, 1877	950	284	11	1138
	Bedworth, Thomas. (*See* Ward & Bedworth.)					
188,842	Beebe, Lewis H., Lakeside, Mich. Preventing the obstruction of water-channels	Mar. 27, 1877	903	275	11	526
194,760	Beebe, William D., Pottsville, Pa. Ratchet-release for unloading coal-cars	Sept. 4, 1877	2	1	12	401
186,785	Beech, Elijah, Manchester, Great Britain. Printing-press	Jan. 30, 1877	978	305	11	175
186,786	Same.....same	Jan. 30, 1877	981	305, 306	11	175
186,978	Beecher, Ebenezer B., assignor to Swift & Courtney and Beecher Company, Westville, Conn. Paper-box machine	Feb. 6, 1877	62	21, 22, 23	11	210
	Beecher, Eugene F., *et al.* (*See* Thiers, William F., assignor.)					
198,446	Beecher, L. Wheeler, Westville, Conn. Fruit-basket	Dec. 25, 1877	777	236	12	1083
185,884	Beecher, Samuel N., Millford, Conn. Vehicle-spring	Jan. 2, 1877	68	21	11	17
189,419	Beeley, George W., Toledo, Ohio. Fastening for buttons	Apr. 10, 1877	414	130	11	620
196,864	Beer, Peter, Detroit, Mich. Preparing matches for dipping	Nov. 6, 1877	130	39	12	779
196,777	Beers, Daniel G., Sandy Hook, Conn. Clothes-wringer	Nov. 6, 1877	38	12	12	766
195,694	Beers, George W, Bridgeport, Conn. Handle for carriage and other doors	Oct. 2, 1877	3	1	12	561
	Beers, Philo M. (*See* Thompson & Beers.)					
188,569	Beers, Philo M., Bridgeport, assignor to Wheeler & Wilson Manufacturing Company, Fairfield, Conn. Machine for pointing sewing-machine needles	Mar. 20, 1877	612	190	11	479
186,977	Beers, William P., Newark, N. J. Last-block fastening	Feb. 6, 1877	62	21	11	210
188,095	Beesley, Henry, New York, N. Y., assignor of one-half interest to I. Jenrel, New York, N. Y. Gyroscope-top	Mar. 6, 1877	127	38	11	398
	Beggs, James. (*See* Healy & Beggs.)					
194,546	Beggs, James, Paterson, N. J. Automatic stop for elevators	Aug. 28, 1877	797	237	12	464
191,020	Behm, John F., Omaha, Nebr. Ice-plow	May 22, 1877	953	283	11	894
194,322	Behrens, Carl L., Davenport, Iowa. Fire-escape and hanging scaffold	Aug. 21, 1877	568	170	12	324
189,684	Behrens, George E., Brooklyn, N. Y., assignor to O. B. Reynolds and J. Smalley, Boundbrook, N. J. Anti-friction compound	Apr. 17, 1877	688		11	664
197,816	Behrens, Nicolaus, a signor of one-half interest to C. Hilkens, Chicago, Ill. Bridgegate	Dec. 4, 1877	109	34	12	961
195,476	Behrens, William H., Orange, N. J. Machine for hardening and sizing hat-bodies	Sept. 25, 1877	755	223	12	430
187,085	Beidler, George A., Philadelphia, Pa. Burner and lantern	Feb. 6, 1877	161	53	11	225
195,744	Beidler, George A., Philadelphia, Pa. Lantern	Oct. 2, 1877	55	16	12	568
	Beidler, H. M. (*See* Hoffmeister, Louis C., assignor.)					
188,570	Beidler, Henry M, Philadelphia, Pa. Blue-glass sun-bath	Mar. 20, 1877	613	190	11	479
7,623	Beidler, Jacob H., Lincoln, Ill., assignor to T. F. Keating, Pittsburg, Pa.; said Keating assignor to Yale Lock Manufacturing Company, Stamford, Conn. Post-office box (Reissue)	Apr. 24, 1877	1156	352	11	733
	Beidler, Jacob A. (*See* Reed, Lemon M., assignor.)					
188,843	Beiser, Charles W., New York, N. Y. Horse-brush	Mar. 27, 1877	904	275	11	526
186,225	Beland, Louis, North Springfield, Mo. Clamp for holding ratchet-drills for drilling railway-rails	Jan. 16, 1877	415	127	11	79
197,202	Belden, Henry S., Canton, Ohio. Vapor-burner	Nov. 20, 1877	508	150	12	879
197,817	Belden, Leslie, New York, N. Y. Baling cotton	Dec. 4, 1877	109	34	12	962
	Belden, C. A. (*See* Edwards, Charles, assignor.)					
	Belknap Manufacturing Company. (*See* Ellis, David T., assignor.)					
186,448	Belknap, Thaddeus, Austinburg, Ohio. Animal-trap	Jan. 23, 1877	662	203	11	122
186,787	Bell, Alexander, Boston, Mass. Electric telegraphy	Jan. 30, 1877	985	306, 307	11	175, 176
189,178	Bell, Azel H., and N. Hills, Belle Plaine, Iowa. Press for making ginger-snaps	Apr. 3, 1877	141	50	11	578
197,083	Bell, Azel H., Belle Plaine, Iowa. Vise	Nov. 13, 1877	370	109	12	821
193,684	Bell, Charles L., Saluda, Va. Device for preventing the unauthorized removal of corks from bottles	July 31, 1877	1191	357	12	208
192,967	Bell, Daniel F., Miami, Mo. Boot-cleaner	July 10, 1877	429	128	12	79
189,685	Bell, George S., Sumner, Mich. Churn	Apr. 17, 1877	689	212	11	665
193,108	Bell, George W., Brooklyn, N. Y. Sheet metal can	July 17, 1877	581	175	12	107
	Bell, James H., *et al.* (*See* Medearis, John T., assignor.)					
194,641	Bell, James H., assignor of part interest to T. Medearis, Fayetteville, J. N. Sullivan, Flat Creek, and D. J. Noblitt, Booneville, Tenn. Anti-friction journal	Aug. 28, 1877	877	262	12	375
	Bell, Joseph. (*See* Stukenborg & Bell.)					
189,686	Bell, Miller G., Glen Gardner, N. J. Grate	Apr. 17, 1877	690	213	11	665
187,804	Bell, Nicholas M., McHenry, Ill. Grate	Feb. 27, 1877	904	231	11	350

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Bell, Robert D. (*See* Weed & Bell.)					
	Bell, W. A., *et al.* (*See* Rittenberry, John W., assignor.)					
188,039	Bell, William M., Collingwood, Canada. Boat-detaching apparatus	Mar. 6, 1877	86	25	11	392
196,865	Bellamy, Charles L., Arlington, N. J. Weighing-scales	Nov. 6, 1877	130	39	12	779
187,086	Belles, Samuel W., Orion, Mich. Trussed whiffletree	Feb. 6, 1877	162	53	11	225
	Bellows, Charles C., *et al.* (*See* Meeker, De Witt C., assignor.)					
186,527	Belser, James H., Marlborough, Mass. Shaft-coupling	Jan. 23, 1877	728	224	11	131 / 132
193,214	Bemis, George W., Cincinnati, Ohio. Hand-car	July 17, 1877	677	206	12	120
187,585	Bemis, Sumner A., Springfield, Mass. Carriage-axle	Feb. 20, 1877	670	208	11	311
194,801	Same.....Car-axle box	Sept. 4, 1877	47	15	12	407
189,078	Bemis, Warren B., Cincinnati, Ohio. Apparatus for preparing butter for packing	Apr. 3, 1877	61	22	11	567
189,014	Benade, Charles L., assignor to self and J. Kell, York, Pa. Balancing and rocking millstones	Apr. 3, 1877	5	2	11	559
7,850	Béné, John, Brooklyn, N. Y. Refining and bleaching hair (Reissue)	Aug. 21, 1877	751		12	348
	Benedict & Burnham Manufacturing Company. (*See* Hallas & Weeden, assignors.)					
	Same.....(*See* Hallas, James G., assignor.)					
	Same.....(*See* Locke, Edward A., assignor.)					
	Same.....(*See* Shelton, John H., assignor) (Reissue.)					
	Same.....(*See* Weeden, William N., assignor.)					
	Benedict, Alonzo. (*See* Haylock & Benedict.)					
	Benedict, Aurelius. (*See* Wilcox & Benedict.)					
	Benedict, Cyril P. (*See* Hayden, John J., assignor.)					
195,251	Benedict, Elias U., assignor of one-half interest to E. T. Prindle, Anrora, Ill. Car-roof	Sept. 18, 1877	532	155	12	491
	Benedict, George. (*See* Wilcox & Benedict.)					
	Benedict, George G. (*See* Sleeper, Charles T., assignor.)					
195,432	Benedict, Heman, and B. A. F. Greer, Mount Vernon, Ohio. Scale-beam	Sept. 18, 1877	698	206	12	515
	Benedict, Jacob M. (*See* Storm, Garry, assignor.)					
195,083	Benedict, William A., Ann Arbor, Mich. Carriage-top	Sept. 11, 1877	341	103	12	455
	Benham, John, *et al.* (See White, Hugh, assignor.)					
	Benhams & Stoughtenborough. (*See* McKeever, Timothy W., assignor.)					
191,277	Benjamin, Alfred, New York, N. Y. Hoop-skirt	May 29, 1877	1211	363	11	938
191,641	Same.....Braided hoop-skirt spring and machine for same	June 5, 1877	123	38	11	992
196,327	Benjamin, Edwin, Chicago, Ill. Machine for planing wood	Oct. 23, 1877	685	197	12	681
196,739	Same.....Chip-breaker for planing-machines	Nov. 6, 1877	2	1	12	761
	Benjamin, Myron E. (*See* Roberts & Benjamin.)					
	Benner, Adoniram J. (*See* Lyons, Patrick, assignor.)					
198,182	Bennerscheidt, Joseph, Anaheim, Cal. Well-boring machinery	Dec. 18, 1877	497	154	12	1033
191,507	Bennett, Daniel, Baldwin Township, Pa. Glass-furnace	May 29, 1877	1435	432	11	966
191,642	Bennett, Daniel, Chillicothe, Ohio. Oil-can	June 5, 1877	124	38	11	993
	Bennett, David N., *et al.* (*See* Hendley, James W., assignor.)					
192,219	Bennett, Demott S., assignor of one-half interest to W. H. Board, Manchester, Iowa. Butter-worker	June 19, 1877	725	222	11	1089
188,845	Bennett, Edward P., Cobleskill, N. Y., assignor to Washburn & Moen Manufacturing Company, Worcester, Mass. Wire bale-tie	Mar. 27, 1877	906	275	11	526
	Bennett, Edwin. (*See* Pointon, Philip, assignor.)					
191,021	Bennett, Elmore D., Allegany, N. Y. Milk-cooler	May 22, 1877	954	283	11	894
185,885	Bennett, Erasmus, Independence, N. Y. Wagon-brake	Jan. 2, 1877	69	21	11	17
189,015	Bennett, James O. A., Morrison, Ill. Garbage-truck	Apr. 3, 1877	6	2	11	559
	Bennett, Jasper N. (*See* Uller & Bennett.)					
	Bennett, John. (*See* Bennett, Stephen and J.)					
	Bennett, John A. (*See* Clarke, Jerome B., assignor.)					
197,010	Bennett, John F., Pittsburg, Pa. Blast-furnace	Nov. 13, 1877	289	86	12	809
193,913	Bennett, John M. C., assignor of one-half interest to W. Bradshaw, Lansing, Mich. Gate	Aug. 7, 1877	112	36	12	250
191,915	Bennett, John O., Urbana, Ohio. Corn-planter	June 12, 1877	592	122	11	1033
191,299	Bennett, Lewis H., Plymouth, Mich. Windmill	May 29, 1877	1231	370	11	941
186,528	Bennett, Morris D., Horseheads, N. Y. Running-gear for wagons	Jan. 23, 1877	729	225	11	132
187,805	Bennett, Peter M., and G. C. C. Smith, Lebanon, Mo. Bolting-reel	Feb. 27, 1877	905	281	11	351
189,687	Bennett, Stephen and J., North Evans, N. Y. Hot-water heating apparatus	Apr. 17, 1877	691	213	11	665
191,559	Bennett, Thomas D., and H. B. Moody, Harrisonville, Mo. Curry-comb	June 5, 1877	49	14	11	983
	Bennett, Thomas G. (*See* Wetmore & Bennett.)					
188,844	Bennett, Thomas G., assignor to Winchester Repeating-Arms Company, New Haven, Conn. Magazine fire-arm	Mar. 27, 1877	904	275	11	526
191,512	Bennett, William H., Brooklyn, assignor of one-half interest to E. Rutzler, New York, N. Y. Ventilation and disinfection of building	June 5, 1877	2	1	11	977
193,362	Bennett, William H., and H. R. Height, Lebanon, Tenn. Cultivator-plow	July 24, 1877	851	261	12	151
198,560	Bennett, William H., New York, N. Y. Combined blotting-pad and ruler	Dec. 25, 1877	882	269	12	1098
197,449	Bennitt, Jesse H., Hamburg, Mich. Potato-digger	Nov. 27, 1877	769	229	12	897
195,082	Benson, George T., Jersey City, N. J. Cigar-lighter	Sept. 11, 1877	340	103	12	455
187,087	Benson, Henry C., Yonkers, assignor to J. Reckendorfer, New York, N. Y. Pen-holding pencil-point protector	Feb. 6, 1877	162	54	11	225
193,071	Same.....Fountain-pen	July 17, 1877	532	161	12	101
186,100	Benson, Joseph, Boston, Mass. Vapor-lamp	Jan. 9, 1877	288	86	11	55
186,101	Same.....Vapor-burner	Jan. 9, 1877	288	87	11	55
186,102	Same.....Vapor-lamp	Jan. 9, 1877	289	87	11	55
	Bent, Walter T. (*See* Rice, Israel L., assignor.)					
	Bent, William G. (*See* Gorman, George, assignor.)					
192,220	Benthin, Carl F. J., Flushing, N. J. Wagon-brake	June 19, 1877	726	222	11	1089
	Bentley, Samuel G. (*See* Lusby & Bentley.)					
191,916	Benton, George W., assignor of one-half interest to J. Garwood, Canaseraga, N. Y. Washing-machine	June 12, 1877	393	123	11	1033
	Benzinger, Friedrich. (*See* Rettig, George, assignor.)					
194,323	Berbeyer, H. Clement, Price, Mo. Fruit-picker	Aug. 21, 1877	569	170	12	354
188,094	Berdan, Addison, Salem, Mich. Stopper for oil-cans	Mar. 6, 1877	127	38	11	398
	Berens, William E. (*See* Hills & Berens.)					
195,563	Berg, John, Chicago, Ill. Extension-ladder	Sept. 25, 1877	833	247	12	542
194,887	Berg, John N., Minneapolis, Minn. Measuring-funnel	Sept. 4, 1877	128	39	12	418
	Berg, Ole. (*See* Artley, Berg & Dieterlea.)					
188,228	Bergen, Margaret H., Brooklyn, N. Y. Catch for corset-clasps, &c	Mar. 13, 1877	277	86	11	423
196,417	Berger, August, Hartford, Conn. Syringe	Oct. 23, 1877	766	222	12	694
190,732	Berger, Jean M., Charleston, S. C. Vermin-trap	May 15, 1877	661	196	11	848

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.	
186,379	Bergey, Jacob, Wadsworth Township, Ohio. Combined cultivator and seeder	Feb. 6,1877	67	23	11	210, 211	
196,108	Bergh, Bror F., Milford, Mass. Machine for feeding and driving nails	Oct. 16, 1877	448	131	12	640	
189,420	Berghold, Alexander, New Ulm, Minn. Telescopic ballasting-tube for vessels	Apr. 10, 1877	415	130	11	620	
191,300	Bergner, George, Washington, Mo. Apple paring and coring and peach paring and stoning machine	May 29, 1877	1231	370	11	941	
195,915	Bergner, Theodore, Philadelphia, Pa. Drawing-board	Oct. 9, 1877	233	67	12	602	
	Bergstraser, Samuel L. (*See* Tyler, John B., assignor.)						
	Bergstrom, Lars G. (*See* Thompson & Bergstrom.)						
198,268	Bergstrom, Lars P., Rock Island, Ill. Winding-alarm for clocks	Dec. 18, 1877	599	181	12	1047	
	Bering, J. Edward, *et al.* (*See* Faries, Robert, assignor.)						
197,818	Bering, James E., Decatur, and A. and M. Barnes, McLean County, Ill. Corn-planter	Dec. 4, 1877	111	34	12	962	
	Berkmyer, George. (*See* Urban & Berkmyer.)						
190,266	Berlie, Henry, and F. X. Lamboley, New York, N. Y. Fountain-pen	May 1, 1877	152	44	11	766	
	Bernard, Charles F. (*See* Joute & Bernard.)						
188,571	Berndt, Alexander, Newark, N. J. Button-tab	Mar. 20, 1877	614	190	11	479	
185,886	Bernhard, Isaac, Paris, France. Lubricating and anti-incrustating compositions	Jan. 2, 1877	69		11	17	
	Berrian, Edward. (*See* Crist & Berrian.)						
191,825	Berrien, Leonard B., Galesburg, Ill. Plaiting-machine	June 12, 1877	311	96	11	1022	
186,449	Berry, Joe, Springfield, Mass. Apparatus for casting valve-seats	Jan. 23, 1877	663	203	11	122	
196,866	Berry, John L., Williamsport, Pa. Packing-case	Nov. 6, 1877	131	40	12	779	
	Berry, Joseph H. (*See* McKenzie, William, assignor.)						
	Berry, Perley M. (*See* Sherman, Lewis P., assignor.)						
193,914	Berry, Scotto, New Sharon, assignor of one-half interest to R. H. and J. P. Merrill, Skowhegan, Me. Moccasin	Aug. 7, 1877	112	36	12	250	
186,788	Berry, William, jr., assignor to W. Berry, Fond du Lac, Wis. Stump-extractor	Jan. 30, 1877	988	307	11	176	
196,438	Berry, William, Taycheedah, assignor of one-half interst to J. S. McDonald, Fond du Lac, Wis. Stump-extractor	Sept. 25, 1877	715	211	12	525	
192,411	Berry, William T., Maysville, Ky. Letter-sheet and envelope	June 26, 1877	951	285	11	1130	
194,324	Bersch, Josef, Baden, Austria, assignor of one-half interest to H. Guth, New York, N. Y. Preserving beer	Aug. 21, 1877	569	171	12	324	
	Bertolet, Alfred S. (*See* Himrod, Charles, assignor.)						
186,658	Bertram, Joseph H., Lawrence, Mass. Oiler	Jan. 30, 1877	863	267	11	159	
190,407	Bertram, William H., Boston, Mass. Compound for cleaning and polishing brass	May 8, 1877	311		11	795	
195,334	Besanson, John, Titusville, Pa. Cleaning plush and cloth	Sept. 18, 1877	605		12	501	
196,867	Besnard, John L., Island of Guernsey, Great Britain. Apparatus for stoppering bottles, &c	Nov. 6, 1877	132	40	12	779	
191,301	Best, Daniel, Auburn, Oreg. Washing-machine	May 29, 1877	1233	370	11	941	
	Best, Frederick, *et al.* (*See* Glover, William H., assignor.)						
191,017	Best, James F., Galva, Ill. Harness-saddle	June 12, 1877	395	123	11	1033	
197,757	Bestor, Francis L., assignor of one-third interest to V. Pardun, Oskaloosa, Iowa. Barb for wire fences	Dec. 4, 1877	55	18	12	953	
	Betley, Ralph. (*See* Wolf & Betley.)						
	Betterly, Albert. (*See* O'Connor, Michael, assignor.)						
	Bettes, Alexander. (*See* Uril, William T., assignor.)						
	Betts, Alfred, *et al.* (*See* Walker, William, assignor.)						
	Betts, Chauncy G., *et al.* (*See* Upham, Andrew J., assignor.)						
196,555	Betts, Edgar K., Lansingburg, assignor to Earl & Wilson, New York, N. Y. Cuff	Oct. 30, 1877	928	269	12	726	
196,556	Same	same	Oct. 30, 1877	929	269	12	726
	Betts, Edward, *et al.* (*See* Walker, William, assignor.)						
188,572	Betts, Jacob, assignor to self and S. Schirmer, New York, N. Y. Suspenders	Mar. 20, 1877	614	191	11	479	
198,447	Betts, John, Brooklyn, N. Y. Fair leader for ships' rigging	Dec. 25, 7877	778	236	12	1083	
	Betts, Lewis F. (*See* Dennis & Betts.)						
197,242	Bettz, Nickolaus, St. Ingbert, Germany. Machine for scaling, cleaning, and polishing wire	Nov. 20, 1877	547	162	12	855	
188,846	Beugger, Johannes, Winterthur, Switzerland. Apparatus for leveling rails of railways	Mar. 27, 1877	907	276	11	527	
191,560	Beugler, Edward F., Williamsport, Pa., assignor of one-half interest to J. Du Bois. Lathe-tool	June 5, 1877	40	15	11	983	
7,595	Bevan, Samuel, assignor, by mesne assignments, to H. Diston & Sons, Philadelphia, Pa. Grinding-machine	Apr. 10. 1877	535	167	11	636	
190,267	Bevans, Alexander L., Flushing, N. Y. Pruner and fruit-picker	May 1, 1877	153	45	11	766	
7,548	Bevelander, Benjamin, Boston, Mass., assignor to Globe Nail Company. Nail-assorting and feeding machine (Reissue)	Mar. 6, 1877	264	82	11	415	
188,770	Same Machine for finishing horseshoe-nails	Mar. 27, 1877	818	250	11	515	
190,811	Bevelander, Benjamin, Boston, Mass. Mechanism for winding and reeling rope or cordage	May 15, 1877	725	215	11	857	
188,847	Beverly, John W., Lisbon, Mo. Tobacco-transplanter	Mar. 27, 1877	908	276	11	527	
	Beverstock, Edwin J. (*See* Smith & Beverstock.)						
186,297	Bevins, Seth H., New York, N. Y., J. Weis, Jersey City, N. J., and W. H. Phillips, New York, N. Y. Reversing-valve for steam-engines	Jan. 16, 1877	474	146	11	87	
190,464	Beyschlag, Charles, Indianapolis, Ind. Artificial production of mineral-waters	May 8, 1877	368	107	11	802	
189,333	Bibbins, John M., Williamsport, Pa. Boot and shoe	Apr. 10, 1877	334	106	11	610	
	Bichl, Joseph. (*See* Kahler & Bichl.)						
	Bickell, James F. (*See* Connelly & Bickell.)						
196,182	Bickers, Garnett R., Farmville, Va. Shoe and shoe-fastener	Oct. 16, 1877	522	151	12	650	
196,778	Bickford, Erskine F., Malden, assignor to Boston Rubber Shoe Company, Boston, Mass. Boot	Nov. 6, 1877	39	12	12	766	
187,247	Bickford, Ezekiel C., Monmouth, Ill. Napkin-holder	Feb. 13, 1877	330	106	11	259	
196,868	Bickford, Ezekiel C., Philadelphia, Pa. Shaft-tug lining	Nov. 6, 1877	133	40	12	779	
	Bickford, Willis I. (*See* Bartlett & Bickford.)						
190,268	Bicknell, James W., assignor to Boston Machine Company, Boston, Mass. Mechanism for automatically selecting and presenting staples	May 1, 1877	154	45	11	766	
196,183	Bidwell, Jason A., Cleveland, Ohio. Die-grinding machine	Oct. 16, 1877	523	152	12	650	
196,869	Bidwell, Jason H., Cleveland, Ohio. Cut-nail machine	Nov. 6, 1877	134	40, 41, 42	12	780	
186,529	Biegelaar, John F., Saint Louis, Mo. Eave-trough	Jan. 23, 1877	731	225	11	132	
189,991	Bierce, William W., Memphis, Tenn., assignor of one-half interest to J. C. Spencer, New York, N. Y. Ticket-reel	Apr. 24, 1877	1010	309	11	715	
192,968	Same Postage or revenue stamp	July 10, 1877	429	128	12	79	
194,212	Same same	Aug. 14, 1877	440	134	12	300	
189,334	Bigalow, Asher T., Union, Iowa. Car coupling	Apr. 10, 1877	334	107	11	610	
	Bigelow Carpet Company. (*See* Buzzell, John P., assignor.)						
	Bigelow, Charles H., *et al.* (*See* Montelh, Robert H., assignor.)						
	Bigelow, Elisha A. (*See* Tannahill, John N., assignor.)						

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Bigelow, John. (*See* Blanchard, Helen A., assignor.)					
190,539	Bigelow, Levi H., Fremont Center, Mich. Device for setting, jointing, and gaging saw-teeth	May 8, 1877	440	129	11	812
192,811	Bigeon, Charles, Cincinnati, Ohio. Street-gutter	July 10, 1877	283	83	12	59
	Biggerstaff, John. (*See* Fulton, Louis B., assignor.)					
189,546	Bignall, Burnett B., Chicago, Ill. Fluting-iron	Apr. 17, 1877	551	171	11	647
	Billings, Andrew W. (*See* Hunt, Simon B., assignor.)					
	Same ... (*See* Parmelee, Dubois D., assignor.)					
194,761	Billings, Clark E, Warren, Vt. Carpenter's scribing-tool	Sept. 4, 1877	3	1	12	401
7,868	Billings, George H., Boston, Mass. Machine for cold-drawing rods and shafting. (Reissue)	Sept. 4, 1877	195	60	12	427
7,929	Billings, George W., Chicago, Ill. Railway frog (Reissue)	Oct. 30, 1877	1102	321	12	751
197,011	Same Apparatus for making metallic spools	Nov. 13, 1877	292	86	12	810
187,699	Billings, John D., and M. A. Decker, New York, N. Y. Horseshoe	Feb. 27, 1877	800	248	11	337
194,028	Billings, John D., New York, N. Y. Machine for rolling horseshoe-blanks	Aug. 14, 1877	249	74	12	275
198,448	Same Machine for making horseshoes	Dec. 25, 1877	778	236	12	1083
	Billings, Luther G. (*See* Tremaine, William B., assignor.)					
7,504	Bingham, Edward W., Philadelphia, Pa. Brick-kiln (Reissue)	Feb. 13, 1877	537	165	11	286
186,706	Same same	Jan. 30, 1877	907	281	11	165
188,277	Same same	Mar. 13, 1877	318	101	11	429
186,789	Bingham, Gilbert E, Chicago, Ill. Gas-regulator	Jan. 30, 1877	989	307	11	176
193,072	Bingham, Samuel H., assignor to Bullock Printing-Press Company, Philadelphia, Pa. Mold for casting ribbed surfaces	July 17, 1877	534	161	12	101
194,642	Same Machine for winding paper, &c., into rolls	Aug. 28, 1877	878	262	12	375
190,116	Bingham, Thomas, and T. J. McTighe, assignors of five-eighths interest to J. L. and W. J. Lewis, Pittsburg, Pa. Low-water alarm	May 1, 1877	3	2	11	747
	Binns, Robert. (*See* Latham & Binns.)					
7,911	Birch, John S., New York, assignor, by mesne assignments, to W. A. and C. C. Cummings, Brooklyn, N. Y. Adjustable watch-key (Reissue)	Oct. 16, 1877	629	181	12	665
196,418	Birch, John S., Orange, N. J. Key-ring	Oct. 23, 1877	767	222	12	694
195,564	Birch, Joseph W., assignor of one-half interest to I. H. Holmes, New York, N. Y. Lamp-bracket	Sept. 25, 1877	833	248	12	542
	Birch, Thomas S. (*See* Rothschild & Birch.)					
187,586	Bird, Francis W., East Walpole, Mass. Paper-calendering machine	Feb. 20, 1877	671	{208 209}	10	311
188,096	Bird, Peter E., Jenkintown, Pa. Thill-coupling	Mar. 6, 1877	128	38	11	398
186,530	Bird, Theodore S., and W. Boggs, Green Point, N. Y. Dumping-scow	Jan. 23, 1877	731	225	11	132
195,565	Birdsall, Richard M., Clinton, Wis. Refrigerator-building	Sept. 25, 1877	835	248	12	542
197,084	Birdsall, John C., South Bend, Ind. Clover thrashing and hulling machine	Nov. 13, 1877	371	{109 110}	12	841
191,302	Birge, William H., Franklin, Pa. Sand-pump	May 29, 1877	1234	371	11	941
193,915	Same same	Aug. 7, 1877	113	36	12	250
7,964	Birkinbine, Henry P. M., Philadelphia, Pa. Operating-valve of city water-mains. (Reissue)	Nov. 27, 1877	1952	315	12	936
194,762	Birks, Walter S., Syracuse, N. Y. Clamp for straightening files in hardening	Sept. 4, 1877	4	1	12	401
	Birtwell, Ebenezer. (*See* Kirks, John S., assignor.)					
193,137	Bisbee, Randall, New York, N. Y. Brush	July 17, 1877	605	183	12	110
189,016	Bisch, Theodore, De Soto, Mo. Lead-furnace bottom	Apr. 3, 1877	7	3	11	559
194,326	Bischoff, Anton, assignor to self and F. Burger, New York, N. Y. Pulley-block	Aug. 21, 1877	572	171	12	324
192,969	Bishop, Abner B., Medina, Ohio. Vehicle-spring	July 10, 1877	430	120	12	79
186,298	Bishop, Bainbridge, New Russia, N. Y. Attachment for key-board musical instruments	Jan. 16, 1877	475	146	11	87
	Bishop, Charles J., *et al.* (*See* Ashton & Maynadier, assignor.)					
	Bishop, Clement B., *et al.* (*See* Willson & Meigs, assignors.)					
	Bishop, Clement B., *et al.* (*See* Willson, Thomas A., assignor.)					
	Bishop, Edward W. (*See* Keplor, William M., assignor.)					
190,408	Bishop, Francis A., Placerville, Cal. Cut-off valve	May 8, 1877	311	91	11	795
193,916	Bishop, Gilbert, Holton, Kans. Scythe	Aug. 7, 1877	115	36	12	250
	Bishop, Jason S. (*See* Fletcher, George, assignor.)					
	Same (*See* Wells, Nathaniel M., jr., assignor.)					
194,643	Bishop, John G., Cicero, Ind. Horse hay-rake	Aug. 28, 1877	879	262	12	376
189,421	Bishop, Joshua, assignor of one-half interest to J. Forney, Philadelphia, Pa. Hydrocarbon-burner	Apr. 10, 1877	416	131	11	620
187,248	Bishop, Seth W., and M. C. Johnson, assignors to Pratt & Whitney Company, Hartford, Conn. Screw-cutting die	Feb. 13, 1877	331	106	11	259
193,473	Bissell, Frank S., Pittsburg, Pa. Summer front for fire-place grates	July 24, 1877	953	290	12	166
189,992	Bissell, Lorenzo, Ghent, Ohio. Revolving horse-rake	Apr. 24, 1877	1012	310	11	715
193,593	Bissell, Thomas A., Detroit, Mich. Car-axle box	July 31, 1877	1095	328	12	195
191,213	Same same	Aug. 14, 1877	441	134	12	310
7,835	Bissell, Willard P., Richmond, Va. Binder for invoices (Reissue)	Sept. 18, 1877	700	{297 208}	12	515
190,260	Same Temporary binder	May 1, 1877	155	45, 46	11	766
	Bissett, Charles A. (*See* Manville & Bissett.)					
191,513	Bissonett, Joseph, Jericho, Vt. Milk-cooler	June 5, 1877	4	1	11	977
	Bitter, Charles F., *et al.* (*See* Kast, Joseph, assignor.)					
192,970	Bitting, Benjamin L., Rural Hall, N. C. Stay for hoops	July 10, 1877	431	129	12	79
187,587	Bixby, Lucy J., Binghamton, N. Y. Pattern-chart for cutting garments	Feb. 20, 1877	672	209	11	312
195,878	Bjick, Carl F, Chicago, Ill. Treating leaf-tobacco	Oct. 9, 1877	194	55	12	597
190,661	Black, Albert D., Portland, Me. Motor for sewing-machines	May 15, 1877	593	175	11	859
187,249	Black, Gideon, assignor to self and J. T. Moye, Daleville, Ala. Plow	Feb. 13, 1877	331	106	11	259
7,452	Black, Greene V., Jacksonville, Ill., assignor, by mesne assignments, to S. S. White, Philadelphia, Pa. Dental drill (Reissue)	Jan. 2, 1877	185	57	11	33
	Black, Harry C. (*See* White, Patrick F., assignor.)					
194,403	Black, James F., Oshkosh, Wis. Rolling-mill tender	Aug. 21, 1877	640	192	12	334
193,547	Black, John J., Cleveland, Ohio. Fifth-wheel for wagons	July 31, 1877	1096	328	12	195
193,138	Black, William Z, Roann, Ind. Lifting-jack	July 17, 1877	605	183	12	110
190,270	Blackburn, Frederick, and V. Moeslein, assignors to selves, H. Friedburger, H. L. and B. Strouse, Philadelphia, Pa. Straw-sewing machine	May 1, 1877	156	46	11	766
196,328	Blackhall, Edward W., Toronto, Canada. Lamp-chimney	Oct. 23, 1877	685	198	12	681
187,088	Blackinton, Jesse, assignor to W. M. Richardson and F. W. Warner, Roscoe, Ill. Dynamometer	Feb. 6, 1877	163	54	11	225
186,074	Blackman, Carlos W, assignor of one-half interest to W. Schollhorn, New Haven, Conn. Latch for carriage-doors	Jan. 9, 1877	262	79	11	52

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Blackman, Ebenezer. (*See* Arnold & Blackman) (Reissue.)					
192,812	Blackman, Ebenezer, New York, N. Y. Balance-spring hook	July 10, 1877	284	83	12	59
194,763	Same.....Lamp-burner	Sept. 4, 1877	6	2	12	401
196,286	Same.....Base for lamp-globes	Oct. 23, 1877	641	186	12	675
197,318	Same.....Oil stove or lamp	Nov. 20, 1877	621	183	12	866
	Blackman, William D. (*See* Dockstader, Adam B., assignor.)					
197,450	Blackmer, Henry, Seneca Castle, W. Ringer, and D. Van Ostrander, Geneva, N. Y. Hoisting-machine	Nov. 27, 1877	770	230	12	897
187,747	Blackwell, Henry B., Boston, Mass. Saccharine composition sirup	Feb. 27, 1877	847	204	11	343
194,325	Blackwell, Henry T., Edinburg, Pa. Tool-carrying truck for use in boring oil-wells ..	Aug. 21, 1877	572	171	12	324
186,075	Blackwell, Zadok T., Carrington, Mo. Corn-sheller	Jan. 9, 1877	263	79	11	52
	Blackwood, Joseph B. (*See* Farley & Blackwood.)					
187,089	Blackwood, William, jr., Detroit, Mich. Water-closet	Feb. 6, 1877	164	54	11	225
189,179	Blair, Charles, assignor to Collins Company, Collinsville, Conn. Manufacture of plow mold-boards	Apr. 3, 1877	142	51	11	578
194,572	Blair, David F., assignor of one-half interest to G. Moses, Owosso, Mich. Churn	Aug. 28, 1877	820	244	12	367
193,314	Blair, George W., Pittsburg, Pa. Finishing glassware	July 24, 1877	806	247	12	145
	Blair, James C. (*See* Blair, John and J. C.)					
195,084	Blair, John and J. C., Madison County, Ohio. Harvester	Sept. 11, 1877	342	103	12	455
195,745	Blair, John A., and W. C. Bush, Fair Hill, Md. Spark-arrester	Oct. 2, 1877	56	17	12	569
191,561	Blair, Robert, San Francisco, Cal. Expanding reamer	June 5, 1877	50	15	11	983
197,539	Blair, William J., Oil City, Pa. Brick-making machine	Nov. 27, 1877	866	257	12	911
190,183	Blaisdell, Augustus, Nashua, N. H. Paint composition for roofs	May 1, 1877	73		11	756
186,450	Blake, Amos S., Waterbury, Conn. Lock for pianos	Jan. 23, 1877	663	203	11	122
	Blake, Charles E. (*See* Bailey, Thomas H.) (Reissue.)					
	Blake, Charles F., trustee, *et al.* (*See* Carr, William S., assignor) (Reissue.)					
195,433	Blake, Christopher, Boston, Mass. Combined desk and table	Sept. 18, 1877	699	207	12	515
	Blake Crusher Company. (*See* Blake, Theodore A., assignor.)					
191,397	Blake, Earl S., Chicago, Ill. Steam vacuum-pump	May 29, 1877	1309	397	11	952
187,588	Blake, Edward S., Pittsburg, Pa. Feeding-hopper for pulverizing-machines	Feb. 20, 1877	673	209	11	312
189,887	Same.....Roll for pulverizing-mills	Apr. 24, 1877	917	280	11	702
192,730	Blake, Francis M., Worcester, Mass. Bale-tie	July 3, 1877	172	50	12	36
	Blake, George A., *et al.* (*See* Thompson, Peter, assignor.)					
7,813	Blake, George F., Boston, Mass., assignor to G. F. Blake Manufacturing Company. Valve and gear for direct-acting engines (Reissue) ..	July 24, 1877	1083	324	12	182
185,887	Same.....Piston	Jan. 2, 1877	70	22	11	17
185,888	Same.....Duplex pumping-engine	Jan. 2, 1877	71	22	11	18
186,659	Blake, George F., Boston, Mass. Duplex pumping-machine	Jan. 30, 1877	865	267	11	159
193,071	Same Pump and check valve	Dec. 11, 1877	364	113	12	1008
189,017	Blake, George W., New York, N. Y. Steam-radiator	Apr. 3, 1877	7	3	11	559 560
189,018	Same.....same	Apr. 3, 1877	8	3	11	560
190,949	Same.....Combined boiler and steam-heater	May 22, 1877	881	261	11	885
190,950	Same.....Air-box for radiators	May 22, 1877	882	261	11	885
196,109	Blake, George W., assignor to Angell & Blake Manufacturing Company, New York, N. Y. Steam-trap	Oct. 16, 1877	451	131	12	640
196,419	Blake, Henry T., New Haven, Conn. Covering plates for butt-hinges	Oct. 23, 1877	768	222	12	694
	Blake, James C. (*See* Marable, Thomas E., assignor.)					
185,814	Blake, Lyman R., Boston, Mass. Boot and shoe	Jan. 2, 1877	3	1	11	9
185,815	Same.....same	Jan. 2, 1877	4	2	11	9
185,816	Same.....Manufacture of boots and shoes	Jan. 2, 1877	4	2	11	9
189,834	Same.....Manufacturing nailed boots and shoes	Apr. 24, 1877	861	263	11	695
189,835	Same.....Nailing-machine for boots and shoes	Apr. 24, 1877	862	263	11	695
189,836	Same.....same	Apr. 24, 1877	863	264	11	695
189,837	Same.....Boot and shoe nailing machine	Apr. 24, 1877	865	264	11	695
	Blake Manufacturing Company, George F. (*See* Blake, George F., assignor.)					
	Same.....same (Reissue.)					
198,561	Blake, Theodore A., assignor to Blake Crusher Company, New Haven, Conn. Ore-crusher	Dec. 25, 1877	884	269	12	1098
198,532	Blake, William, Liverpool, England, assignor to V. E. Manger, New York, N. Y. Measuring device for seed-bag fillers	Dec. 25, 1877	859	261	12	1094
7,893	Blakesleo, Charles W., Litchfield, Conn., assignor of one-half interest to L. S. Wooster. Snap-hook (Reissue) ..	Sept. 25, 1877	955	285	12	559
189,335	Blakeslee, Edward C., assignor to Holmes, Booth & Haydens, Waterbury, Conn. Lamp-extinguisher	Apr. 10, 1877	335	107	11	610
	Blakeslee, Harvey D. (*See* Simmons, Edward M., assignor.)					
196,110	Blakeslee, Homer J., Erie County, Pa. Machine for indicating the force of blows	Oct. 16, 1877	452	132	12	640
193,215	Blakeslee, John R., Cleveland, assignor of one-half interest to E. E. Pierce, Cuyahoga Falls, Ohio. Nut-machine	July 17, 1877	677	206	12	120
189,914	Blakeslee, William W., Spring Lake, Mich. Elevator	Apr. 24, 1877	941	287 288	11	705
191,220	Blakey, Mildred, assignor to J. L. Robertson and G. A. Chalfant, Etna, Pa. Machine for corrugating pipe-sockets	May 29, 1877	1159	347	11	931
192,615	Blakey, Mildred, assignor to self, J. L. Robertson, and G. A. Chalfant, Etna, Pa. Machine for making rectangular bands	July 3, 1877	61	18	12	20
	Blakeslee, William Z., *et al.* (*See* Fox, Francis J., assignor) (Reissue.)					
188,229	Blakeslee, William Z., Saint Petersburg, Pa. Pump for artesian wells	Mar. 13, 1877	278	87	11	423
196,966	Blanc, Joseph, assignor of one-half interest to J. Q. A. Ziegler, Philadelphia, Pa. Toy money-box	Nov. 13, 1877	246	74	12	803
189,915	Blanchard, George T., Plymouth, Me. Fumigator	Apr. 24, 1877	942	288	11	706
193,216	Blanchard, Helen A., assignor to J. Bigelow, trustee, Boston, Mass. Crotchet attachment for sewing-machines	July 17, 1877	679	207	12	120
	Blanchard, James K. (*See* Nickerson & Blanchard.)					
188,278	Blanchard, John H., Boston, Mass. Grate-bar for furnaces	Mar. 13, 1877	319	101	11	429
196,184	Blanchard, Thomas A., Appling, Ga. Plow	Oct. 16, 1877	524	152	12	650
186,300	Blanchard, Virgil W., Weybridge, Vt. Self-cleaning rake	Jan. 16, 1877	478	147	11	88
	Blanchard, William. (*See* Burgess, Richard O., assignor.)					
	Blasi, John N. (*See* Marx & Blasi.)					
192,731	Blasius, John, Chicago, Ill. Binder for sewing-machines	July 3, 1877	172	50	12	37
197,592	Bleloch, George H., Springfield, Mass. Needle-wrapper	Nov. 27, 1877	918	274	12	919
191,221	Bless, James F., Newark, N. J. Smoothing-iron chill	May 29, 1877	1160	348	11	931
	Blim, Frank S., *et al.* (*See* Hodges & Blim.)					
191,222	Blinn, Erastus E., Minneapolis, Minn. Barrel-truck	May 29, 1877	1161	348	11	931

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Drg.	Vol.	Page.
193,634	Bliss, Ebenezer J., assignor to self and S. N. Brown, jr., Boston, Mass. Platform-scale top	July 31, 1877	1137	341	12	201
189,916	Bliss, Francis D., assignor of two-thirds interest to J. W. S. Peck and C. A. Chase, New Haven, Conn. Gas-burner	Apr. 24, 1877	942	288	11	706
	Bliss, George H. (*See* Bliss, John L. and G. H.)					
	Bliss, H. H. (*See* Cross, John R., assignor) (Reissue.)					
192,221	Bliss, John L., Lenox, and G. H. Bliss, West Stockbridge, Mass., said J. L. assignor to said G. H. Bliss. Plaiting-machine	June 19, 1877	727	222	11	1089
193,846	Bliss, Jonathan, Jersey City, N. J., and F. O. Badger, Brooklyn, assignors, by mesne assignment, to W. L. Palmer, New York, N. Y. Treating blood for forming ornamental articles	Aug. 7, 1877	46		12	241
196,420	Bliss, Jonathan, Jersey City, N. J., assignor to W. L. Palmer, New York, N. Y. Die for forming articles of plastic materials	Oct. 23, 1877	769	222	12	694
192,559	Bliss, William, Ashleyville, Mass. Heating-apparatus	July 3, 1877	3	1, 2	12	13
190,271	Bliven Charles, and G. D. Parker, Norfolk, Va. Lamp-bracket		157	46	11	766
190,540	Bliven, Charles, assignor of one-half interest to W. B. Rogers, Norfolk, Va. Sawing-machine	May 8, 1877	441	129, 130	11	812
192,107	Blizzard, William, and E. Mather, Harrisburg, Pa. Paper-pulp screen	June 19, 1877	608	185	11	1074
	Bloch, David. (*See* Bloch, Marcus H. and D.)					
	Bloch, Herman. (*See* Bloch, Marcus H. and D.)					
192,050	Bloch, Marcus H., and D. Bloch, New York, N. Y. Pulley	June 19, 1877	558	170	11	1067
186,226	Block, Theodore L., Sidney, Ill. Wagon-end gate	Jan. 16, 1877	415	127	11	79
191,398	Same.....Feed-trough	May 29, 1877	1310	398	11	952
186,790	Blohm, Heinrich M., assignor to self and J. Erlenwein, New York, N. Y. Crosscut-sawing machine	Jan. 30, 1877	990	307	11	176
193,315	Blomgren, Claus G. and O. U., and S. A. Hawkinson, Chicago, Ill. Printers' lead-shaving machine	July 24, 1877	807	248	12	145
	Blomgren, Oscar U. (*See* Blomgren & Hawkinson.)					
186,451	Blondin, Alfred, Chicago, Ill. Scaffolding	Jan. 23, 1877	664	203	11	122
191,099	Blood, John P., and S. N., Athens, Pa. Machine for making kits and buckets	May 22, 1877	1023	306	11	904
190,733	Blood, Joseph W., Minneapolis, Minn. Pitman connection	May 15, 1877	662	196	11	848
	Blood, Samuel N. (*See* Blood, John P. and S. N.)					
	Bloomingdale, Charles W. (*See* Neally, George, assignor.)					
192,357	Bloomsburg, Peter, assignor to J. Cone, Bristol, Pa. Automatic lubricator for steam-cylinders	June 26, 1877	898	269	11	1123
186,299	Blossom, Joseph R., Brooklyn, N. Y. Gas-governor	Jan. 16, 1877	476	147	11	87
187,349	Blowers, Russel B., Woodland, Cal. Fruit-drier	Feb. 13, 1877	430	135	11	273
191,303	Same.....same	May 29, 1877	1235	371	11	941
196,623	Blum, Jacob, Stapleton, N. Y. Scraping-tool	Oct. 30, 1877	985	288	12	736
192,732	Blume, William M., Brooklyn, N. Y. Safety-pocket	July 3, 1877	173	50	12	37
186,707	Blunt, Hiram S., New York, N. Y. Hand-stamp	Jan. 30, 1877	908	281	11	165
	Blunt, Kate S. (*See* Blunt, William S., assignor.)					
186,408	Blunt, William S., assignor to K. S. Blunt, Bay Ridge, N. Y. Deep-well pump	Jan. 23, 1877	621	189	11	117
195,976	Bly, J. Frank, Chautauqua, N. Y. Butter-package	Oct. 9, 1877	399	84	12	611
	Blymyer Manufacturing Company. (*See* Hedges, Isaac A., assignor) (Reissue.)					
196,421	Boals, James A., Dinsmore, assignor to D. M. Bailey & Brothers, Cardville, Pa. Mail-bag crane	Oct. 23, 1877	769	223	12	694
193,673	Boalt, Francis B., Bainbridge, N. Y. Hay-press	July 17, 1877	535	162	12	101
	Board, Gregory, *et al.* (*See* Young, William B., assignor.)					
	Board, William H. (*See* Bennett, Demott S., assignor.)					
	Boardman, A. J. (*See* Carvers, Henry E., assignor.)					
188,496	Boardman, Charles E., New York, N. Y. Packing for hydraulic cylinders	Mar. 20, 1877	549	169	11	469
187,090	Boardman, John H., Baltimore, Md. Lamp-burner	Feb. 6, 1877	164	54	11	225
191,918	Boardman, William Y. A., Boston, Mass. Household-press	June 12, 1877	395	123	11	1034
196,439	Bocher, Adam, New York, N. Y. Sewing-machine take-up	Sept. 25, 1877	716	212	12	525
194,288	Bock, Augustus F., assignor of one-half interest to C. S. Bock and C. Peters, Battle Creek, Mich. Steam-cooking device	Aug. 21, 1877	531	161	12	319
	Bock, Charles, *et al.* (*See* Bock, Augustus F., assignor.)					
186,980	Boda, Abia Z., assignor of two-thirds interest to G. B. Burton and H. P. Malone, Cleveland, Ohio. Lamp	Feb. 6, 1877	69	24	11	211
198,562	Boda, William J., assignor of one-half interest to W. L. Hughes, Columbus, Ohio. Fire-kindler	Dec. 25, 1877	884	269	12	1098
189,547	Boddie, John S., jr., Nashville, N. C. Water-wheel	Apr. 17, 1877	552	172	11	647
195,203	Bodell, Allen W., Glenford, Ohio. Nut-lock	Sept. 18, 1877	476	141	12	483
197,451	Bodfish, Sumner H., Washington, D. C. Excavator	Nov. 27, 1877	771	230	12	897
186,531	Bodley, Abram M., Newport, Ky. Railway signal	Jan. 23, 1877	733	225	11	132
193,685	Body, William C. D., Virginia City, Nev. Clack-valve for pumps	July 31, 1877	1192	377	12	208
194,509	Boecker, Charles, and G. Finck, New York, N. Y., assignors to said Boecker. Piano-attachment	Aug. 28, 1877	763	227	12	359
186,703	Boehme, Herman V., Sandusky, Ohio. Piano-action	Jan. 30, 1877	909	281, 282	11	165
196,185	Boekel, William, Philadelphia, Pa. Inhaler	Oct. 16, 1877	525	152	12	651
188,461	Boeringer, George, assignor of one-half interest to G. H. Lasar, Saint Louis, Mo. Jumping toy	Mar. 20, 1877	516	159	11	465
187,589	Boesch, Emil, San Francisco, Cal. Reflector	Feb. 20, 1877	674	210	11	212
	Boesch, John C. (*See* Chandler & Boesch.)					
188,334	Bogardus, Adam H., Elkhart, Ill. Ball-thrower for shooting-practice	Mar. 13, 1877	376	118	11	437
189,422	Same.....Spherical glass target	Apr. 10, 1877	417	131	11	621
194,328	Bogart, Abraham L., New York, N. Y. Electric gas-burner	Aug. 21, 1877	571	172	12	324
	Bogart, Samuel S., jr., *et al.* (*See* Lathrop, John D., assignor.)					
	Bogert, George W., *et al.* (*See* Burtis, William, assignor.)					
197,989	Bogert, John L., Flushing, N. Y. Feed-water heater	Dec. 11, 1877	289	89	12	996
189,628	Bogert, Joseph N., and H. C. Holmes, San Francisco, Cal. Grapnel for submerged piles.	Apr. 17, 1877	692	213	11	665
	Boggett, William. (*See* Macintosh & Boggett.)					
7,606	Boggs, T. G., Philadelphia, Pa. Medicine-glass (Reissue)	Apr. 17, 1877	832	258	11	683
	Boggs, William. (*See* Bird & Boggs.)					
195,477	Bogle, James S., Springfield, Ohio. Hoe-shifter for grain-drills	Sept. 25, 1877	756	223	12	491
197,035	Same.....Grain-drill	Nov. 13, 1877	373	110	12	811
197,320	Same.....same	Nov. 20, 1877	624	184	12	866
	Bohler, John J. (*See* Lombard, Hezekiah, assignor.)					
185,195	Bois, James M., Salamanca, N. Y. Hydraulic motor	Jan. 16, 1877	380	119	11	75
190,700	Same.....same	May 15, 1877	621	186	11	841
183,848	Boisnot, Alphonse, San Francisco, Cal. Machine for setting the teeth of saws	Mar. 27, 1877	909	276	11	527

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Boke, Bernard. (*See* Kramer & Boke.)					
197,540	Boland, Ovide, assignor to E. L. Touret, Paris, France. Kneading-machine	Nov. 27, 1877	867	258	12	911
186,532	Boldemann, Theodor, Washington, D. C. Stench-trap	Jan. 23, 1877	734	226	11	132
186,533	Same.....Valve	Jan. 23, 1877	735	226	11	132
	Boldon, Joseph. (*See* Miller & Boldon.)					
	Boles, Daniel. (*See* Steeples, Smith, Boles & Stambaugh.)					
192,616	Bolling, Augustus, Brockton, Mass., assignor of one-half interest to N. D. Morgan, Brooklyn, N. Y. Machinery for trimming the sole-edges of boots and shoes	July 3, 1877	62	18	12	20, 21
186,452	Bollinger, Benjamin B., Louisville, Ohio. Cider and wine press	Jan. 23, 1877	665	204	11	123
186,103	Bollman, George W., Pittsburg, assignor to Eclipse Steam Manufacturing Company, Sharpsburg, Pa. Hot-air reservoir	Jan. 9, 1877	289	87	11	55
190,272	Bollman, John W., and J. G. Ernst, Baltimore, Md. Car-axle lubricator	May 1, 1877	158	47	11	766
	Bollmann, C. T. (*See* Reiher, Frank A., assignor.)					
191,826	Bollmann, Louis, Vienna, Austria. Machine for cutting screw-threads	June 12, 1877	313	97	11	1023
192,144	Same.....Grinding-machine	June 19, 1877	648	{198 199	11	1079
193,337	Bolt, Marlin S., Elmira, N. Y. Burglar-alarm	Dec. 18, 1877	654	199	12	1056
193,393	Bolton, Andrew C., Greenport, N. Y. Broiler and toaster	July 24, 1877	880	269	12	155
198,183	Bolton, Gilman B., Boston, Mass. Supporter for stockings	Dec. 18, 1877	498	155	12	1033
188,849	Bonaventure, Edmund F., assignor of one-fortieth interest to F. Ochs, New York, N. Y. Bung for barrels	Mar. 27, 1877	910	276	11	527
186,534	Bond, Joel L., Indianapolis, Ind. Caster	Jan. 23, 1877	738	226	11	133
189,599	Bond, Joseph, jr., Woonsocket, R. I. Shoe-sewing machine	Apr. 17, 1877	605	187	11	654
189,597	Bond, Nathan O., Fairfax Court-House, Va., assignor to H. A. Richardson, New York, N. Y. Portable wash-stand	Apr. 17, 1877	603	186	11	653
197,714	Bond, Nathan O., Fairfax Court-House, Va. Wash-stand	Dec. 4, 1877	5	2	12	947
188,279	Bond, Virgil A., Gregg County, Texas, assignor to E. F. Bedell. Measuring packaged fabrics	Mar. 13, 1877	320	101	11	429
194,069	Bonesteel, Louisa, Rochester, N. Y. Glove-fastener	Aug. 14, 1877	288	86	12	280
	Bonfils, Paul. (*See* Katon & Bonfils.)					
196,722	Bongardt, John, Brooklyn, N. Y. Fixing water-colors on paper	Oct. 23, 1877	771		12	694
198,209	Bongartz, John H., Providence, R. I. Corset-clasp	Dec. 18, 1877	630	181	12	1047
	Bonn, John H. (*See* Endres, John J., assignor.)					
191,919	Bonner, Samuel D., Newaygo, Mich. Corner-stake	June 12, 1877	396	123	11	1034
	Bonnet, Bonnet. (*See* Skinner & Bonnet)	(Reissue.)				
7,689	Bonney, Charles S., assignor to Lloyd, Supplee & Walton, Philadelphia, Pa. Hollow augers	(Reissue) May 22, 1877	1138	342	11	920
	Bonniot, Germain. (*See* Febvre, Pouget & Bonniot.)					
198,072	Bonzano, Adolphus, assignor to self, D. and W. H. Reeves, and J. Griffen, Phœnixville, and T. C. Clark, Philadelphia, Pa. Column	Dec. 11, 1877	364	113	12	1008
188,230	Booker, Farewell, Shelburne Falls, Mass. Grinding-machine	Mar. 13, 1877	278	87	11	423
188,231	Same.....Pocket-knife	Mar. 13, 1877	279	87	11	424
186,302	Boomer, Oscar F., and H. R. Randall, New York, N. Y. Gas and air carbureter	Jan. 16, 1877	479	147	11	88
187,250	Boomer, Oscar F., and H. R. Randall, Brooklyn, N. Y. Manufacture of malt sirups or extracts	Feb. 13, 1877	332		11	259
196,329	Boone, Alonzo T. and E. O., Chicago, Ill. Combination and seal-lock bolt	Oct. 23, 1877	686	198	12	682
	Boone, Edward O. (*See* Boone, Alonzo T. and E. O.)					
194,404	Boono, Isaac, Troy, Ohio. Hog-dressing machine	Aug. 21, 1877	641	193	12	334
197,012	Boone, John B., Galveston, Tex. Automatic fan	Nov. 13, 1877	293	86	12	810
197,593	Boone, John L., and E. J. Fraser, San Francisco, Cal. Time-attachment for racing-vehicles	Nov. 27, 1877	919	274	12	919
	Boone, W. C. (*See* Park, Theron, assignor.)					
185,889	Boorman, J. Marcus, New York, N. Y. Geometric block for mapping	Jan. 2, 1877	72	23	11	11
190,951	Boorom, Jackson, Mason, Ohio. Grate-shelf	May 22, 1877	882	262	11	865
189,598	Booth, Ebenezer H., West Colesville, N. Y. Platform wagon	Apr. 17, 1877	605	187	11	654
197,758	Same.....same	Dec. 4, 1877	56	18	12	954
	Booth, George. (*See* Milligan & Booth.)					
186,301	Booth, George C., assignor to self and R. Gibson, New York, N. Y. Feed-bag for horses	Jan. 16, 1877	478	147	11	88
196,779	Booth, Jonathan L., Rochester, assignor to Howes, Babcock & Co., Silver Creek, N. Y. Grain-separator	Nov. 6, 1877	39	12	12	706
	Booth, Lloyd, *et al.* (*See* Bourke, Thomas H., assignor.)					
195,879	Booth, Oliver W., and T. Wyatt, Providence, R. I. Shutter-fastening	Oct. 9, 1877	195	56	12	597
188,573	Bopp, Christ., assignor to self and J. H. Swift, Brooklyn, N. Y. Machine for trimming boxes	Mar. 20, 1877	615	191	11	479
192,051	Borchardt, Albert, Hoboken, N. J. Re-enforcing shields for seams	June 19, 1877	559	170	11	1067
197,319	Borchardt, Hugo, Bridgeport, Conn. Gun-sight	Nov. 20, 1877	623	184	12	866
195,695	Borcher, Thomas, San Francisco Cal. Egg-beater	Oct. 2, 1877	3	1	12	561
192,145	Borden, Henry L., Elgin, Ill. Gage-cock	June 19, 1877	651	199	11	1079
193,917	Borden, John, Boston, Mass. Mold for plaster casts	Aug. 7, 1877	115	37	12	251
190,812	Boren, William, Ashland, Ohio. Blast-regulator for thrashing-machines	May 15, 1877	726	215	11	857
189,206	Borgfeldt, Nicholas H., New York, N. Y. Tobacco-stem flattener	Apr. 10, 1877	294	93	11	605
191,514	Same.....Marine ram	June 5, 1877	4	1	11	977
196,780	Borkhim, Henry, San Francisco, Cal. Men's drawers	Nov. 6, 1877	41	13	12	767
191,562	Borland, Andrew J., Donnellson, Iowa. Rotary churn	June 5, 1877	50	15	11	983
194,405	Bornstein, Henry, Boston, Mass. Device for attaching price and show cards	Aug. 21, 1877	642	193	12	334
190,273	Borrman, William, Cincinnati, Ohio. Pipe-elbow	May 1, 1877	159	47	11	767
	Borroughs, Charles. (*See* Sanborn & Borroughs.)					
	Borst, Martin D. (*See* Farrell & Borst.)					
	Bortree, Moses K. (*See* McChesney, Martin H., assignor.)					
189,917	Boss, Martin P., Virginia City, Nev. Ore-feeder for stamps	Apr. 24, 1877	943	283	11	736
187,091	Bossert, Obadiah M., Parnassus, Pa. Combined dinner-bucket and lantern	Feb. 6, 1877	187	55	11	225
198,270	Bossert, William F., Brooklyn, N. Y. Carbureter	Dec. 18, 1877	600	181	12	1048
	Boston Forge Company. (*See* Fisher, William N., assignor.)					
	Boston Machine Company. (*See* Bicknell, James W., assignor.)					
	Boston Rubber Shoe Company. (*See* Bickford, Erskine F., assignor.)					
188,574	Boston, Simon P., Bloomsburg, Pa. Railway-gate	Mar. 20, 1877	617	191	11	479
192,858	Bostwick, Matthew, assignor of one-half interest to S. L. Titus, Painesville, Ohio. Machine for cutting wood-moldings	July 10, 1877	329	97	12	65
197,321	Boswell, Daniel K., Indianapolis, Ind. Cooking, heating, and drying apparatus	Nov. 20, 1877	627	184	12	857
7,985	Bosworth, Charles F., assignor, by mesne assignments, to Straw-Sewing Machine Company, Milford, Conn. Sewing-machine	(Reissue) Dec. 11, 1877	477	150	12	1013
198,338	Bosworth, Charles F., Milford, Conn. Putting in hat-sweats	Dec. 18, 1877	655	199	12	1056

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
195,790	Botchford, Henry J., Leyden, N. Y. Utilizing sour tan-liquor by distillation for plumping hides	Oct. 2, 1877	94		12	575
193,635	Botkin, Jonathan A., Farmland, Ind. Scraper for excavating earth	July 31, 1877	1138	341	12	201
	Botsford, Nathan. (*See* Prichard & Kienardt, assignors.)					
194,573	Botsford, William B., Mill Port, N. Y. Wagon-box corner	Aug. 28, 1877	821	214	12	367
	Bott, Arthur. (*See* Adams & Bott.)					
190,117	Boudeman, Jennie, Kalamazoo, Mich. Book-support	May 1, 1877	4	2	11	747
7,544	Boudren, Thomas, assignor of three-fourths interest to White Manufacturing Company, G. H. Johnson, and C. H. Stevens, Bridgeport, Conn. Adjustable lamp-support for vehicles (Reissue)	Mar. 6, 1877	259	81	11	414
188,335	Boughner, Francis A., assignor of one-half interest to L. Coe. Muscatine, Iowa. Wagon-jack	Mar. 13, 1877	377	118	11	437
188,771	Boult, Myron T., Battle Creek, Mich. Cutter-head	Mar. 27, 1877	819	250	11	515
187,590	Bourgard, Charles, New York, assignor to self and J. Waters, Brooklyn, N. Y. Machine for mounting hair-switches	Feb. 20, 1877	675	210	11	312
192,671	Bourgeois, James J., Saint Cloud, Minn. Water-wheel	July 3, 1877	127	35	12	29
194,123	Bourke, Martin, assignor to Bourke, Wise & Co., Youngstown, Ohio. Boat-launching apparatus	Aug. 14, 1877	362	107, 108	12	289
197,087	Bourke, Martin, assignor of one-half interest to D. M. Wilson, Youngstown, Ohio. Nut-lock	Nov. 13, 1877	375	111	12	822
196,627	Bourke, Thomas H., assignor of two-thirds interest to L. Booth and J. Miller, Youngstown, Ohio. Piston-packing for blower-cylinders	Oct. 30, 1877	993	289	12	736
	Bourke, Wise & Co. (*See* Bourke, Martin, assignor.)					
198,073	Bourn, William, Geneva, N. Y. Stove-leg	Dec. 11, 1877	365	113	12	1009
189,180	Bourne, Joseph, assignor to Meriden Flint Glass Company, West Meriden, Conn. Manufacture of glass shades, globes, &c	Apr. 3, 1877	143	51	11	579
7,684	Bouscay, Eloi, jr., Norwalk, Ohio. Sewing-machine (Reissue)	May 15, 1877	870	258	11	875
144,406	Bouser, Charles W., Paris, Ill. Washing-machine	Aug. 21, 1877	643	193, 194	12	334
189,181	Bousfield, Edward T., Bedford, England. Harrow	Apr. 3, 1877	144	51	11	579
197,322	Same.....Horse hay-rake	Nov. 20, 1877	629	185	12	867
	Boushey, Stephen. (*See* Jasper, William, assignor.)					
190,409	Bovey, George C., Chillicothe, Ohio. Laundry apparatus	May 8, 1877	312	92	11	795
191,563	Bovy, Victor, New York, N. Y. Breech-loading fire-arm	June 5, 1877	51	15	11	983
196,781	Same.....same	Nov. 6, 1877	42	13	12	767
	Bowden, Cornelius, *et al.* (*See* Gibson, Sidney, assignor.)					
191,748	Bowden, John B., Zanesville, Ohio, assignor to W. H. Griffith, jr., and H. F. Achauer, Zanesville, Ohio. Machine for molding stair-rail wreaths	June 12, 1877	233	74	11	1017
192,560	Bowden, Williard F., and J. W. Stewart, Lowell, Mass. Dish-rack	July 3, 1877	4	2	12	13
195,566	Bowdoin, Leon M., Nevada City, Cal. Kitchen-table	Sept. 25, 1877	837	248	12	543
	Bowen, Abraham. (*See* Stiff & Bowen.)					
	Bowen, Charles C. (*See* Garvin & Bowen.)					
	Bowen, Francis A. (*See* Walsh, Francis A., assignor.)					
	Bowen, George, *et al.* (*See* Morse, Edward P., assignor.)					
196,870	Bowen, James H., Philadelphia, Pa. Toy money-box	Nov. 6, 1877	141	42	12	780
191,022	Bowen, John D., Roseburg, Oreg. Plow	May 22, 1877	955	283	11	894
191,643	Bowen, John T., assignor of part interest to D. Hoffmeister and A. Beccue, Lockport, N. Y. Mortising-chisel	June 5, 1877	125	39	11	993
193,798	Bowen, Newton M., Knightstown, Ind. Whiffletree-hook	Aug. 7, 1877	3	1	12	235
189,888	Bower, Buckland P., Cleveland, Ohio. Sewer-gas trap	Apr. 24, 1877	918	280	11	702
194,070	Same.....Sewer, stench, and gas trap	Aug. 14, 1877	289	86	12	280
	Bower, Charles D. W., *et al.* (*See* Keim, Charles J., assignor.)					
189,689	Bower, George, Catasauqua, Pa. Car-coupling	Apr. 17, 1877	692	213	11	665
	Bower, Henry, *et al.* (*See* Genth & Barker, assignor.)					
	Bower, Henry. (*See* Young, Thomas J., assignor.)					
191,827	Bower, Henry S., Mulberry Grove, Kans. Dumping-car	June 12, 1877	315	97	11	1023
193,686	Bowers, George P., Boston, Mass. Stop-cock box	July 31, 1877	1193	357	12	208
188,575	Bowers, Henry C., New York. Circulating steam-generator	Mar. 20, 1877	618	191	11	479
188,5 6	Same.....Salt-water evaporator	Mar. 20, 1877	620	192	11	480
195,478	Bowers, Isaac W., and D. A. Curtis, Petersburg, Mich. Dry-wood grinder for paper pulp	Sept. 25, 1877	757	223	12	431
186,981	Bowers, James A., and M. Adar, Princeton, Ark. Cotton-cleaner	Feb. 6, 1877	71	24	11	211
188,497	Bowert, Joseph R., Concord, N. H. Device for preventing chimneys from smoking	Mar. 20, 1877	549	169	11	469
7,894	Bowers, Marcus M., Richmond, Va., assignor, by mesne assignments, to self, J. P. Schermerhorn, and T. M. Hittzheimer, jr. Reversible plow-point (Reissue)	Sept. 25, 1877	955	286	12	559
197,086	Bowers, Marcus M., assignor of part interest to T. M. Hittzheimer, jr., and J. P. Schermerhorn, Richmond, Va. Reversible plow-point	Nov. 13, 1877	375	110	12	822
191,795	Bowers, Sereno A., and W. Murphy, Burlington, Vt. Picture-frame	June 12, 1877	276	86	11	1019
196,132	Bowin, Charles H., Rocheport, Mo. Harness for breaking horses	Oct. 16, 1877	476	138	12	644
194,124	Bowing, John, London, England. Filter-press	Aug. 14, 1877	363	108	12	289
193,476	Bowker, Horace L., Boston, Mass. Sirup and mineral waters, &c	July 24, 1877	955		12	167
195,479	Bowker, William H., and T. L. Sturtevant, Boston, Mass. Prepared food for animals	Sept. 25, 1877	758		12	431
194,408	Bowling, David R., Dravosburg, Pa. Washing-machine	Aug. 21, 1877	646	194	12	335
144,407	Bowling, John S. and R., Alexandria, Ala. Plow stock and sweep	Aug. 21, 1877	615	191	12	334
	Bowling, Robert. (*See* Bowling, John S. and R.)					
	Bowman, Albert B., *et al.* (*See* Duecker, Conrad, assignor.)					
186,791	Bowman, Frank, New York, N. Y. Blank-book	Jan. 30, 1877	999	308	11	176
190,813	Bowman, Henry H., S. H. Franklin, and C. L. Colby, Osage, Iowa. Heating-stove	May 15, 1877	727	215	11	857
190,814	Same.....same	May 15, 1877	729	216	11	857
191,749	Bowman, James H., Warren, Pa. Manufacturing carbureted-hydrogen gas	June 12, 1877	234	74	11	1013
192,672	Bowman, John, and S. C. Irving, Greenbush, Ill. Animal-stock	July 3, 1877	127	35	12	29
188,232	Bowman, Thomas S., Saint Louis, Mo. Printers' rule	Mar. 13, 1877	280	87	11	421
	Bowman, William K. (*See* Smith, Benjamin F., a s'gnor.)					
189,423	Bown, William, Birmingham, England. Sewing-machine shuttle	Apr. 10, 1877	417	131	11	612
198,563	Bowne, Robert T., Fallston, Ind. Cultivator	Dec. 25, 1877	885	270	12	1098
196,871	Bowro, Matthias E., Upper Norwood, England. Manufacture of elastic fabrics	Nov. 6, 1877	142	43	12	789
	Boyd, A. (*See* Shunk, Christian, assignor.)					
197,323	Boyd, Charles H., Dresden, Ohio. Seed-planter	Nov. 20, 1877	630	185, 186	12	867
193,474	Boyd, Frank, Oshkosh, Wis. Pneumatic signal	July 24, 1877	951	290	12	166
186,921	Boyd, Thomas, Des Moines, Iowa. Fruit-picker	Feb. 6, 1877	3	1	11	273
	Boyd, Thomas L. (*See* Fuller & Boyd.)					
195,186	Boyden, Elbridge, and A. D. Warren, Worcester, Mass. Double window, with blinds and screens	Oct. 16, 1877	526	152, 153	12	651

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
188,097	Boyden, Pordon, assignor to self and C. J. Stratton, Amsterdam, N. Y. Breast-collar for harness	Mar. 6, 1877	129	38	11	398
197,452	Boye, John F., San Francisco, Cal. Desk	Nov. 27, 1877	773	231	12	898
193,316	Boyer, Jacob, Rural Valley, Pa. Horse-yoke	July 24, 1877	808	248	12	145
196,440	Boyington, Levi C., Chicago, Ill. Extension-ladder	Sept. 25, 1877	717	212	12	525
	Boylan, John A. (*See* Hubbell, Thomas J., assignor.)					
187,251	Boyle, James E., Brooklyn, assignor to G. Stevenson; said Stevenson & Boyle assignors to New York Valve and Faucet Company, New York, N. Y. Water-closet	Feb. 13, 1877	334	106	11	259
193,799	Boyle, James E., Brooklyn, N. Y. Valve wash-basin	Aug. 7, 1877	3	1	12	235
193,800	Same. Valve for water-closets	Aug. 7, 1877	5	2	12	235
193,801	Same. Cock or faucet for wash-basins, &c	Aug. 7, 1877	6	2	12	235
186,104	Boyle, Robert K., New York, N. Y. Automatic electric telegraph	Jan. 9, 1877	290	87	11	55
186,453	Same. Electro-magnetic telegraph apparatus	Jan. 23, 1877	666	204	11	123
197,243	Boylston, Thomas, New York, N. Y. Chin-adjuster	Nov. 20, 1877	549	162	12	855
192,222	Boynett, Edward G., Jersey City, N. J. Watch	June 19, 1877	728	222	11	1089
7,748	Boynton, Eben M., Grand Rapids, Mich., assignor to Wheeler, Madden & Clemson Manufacturing Company. Saw-tang (Reissue)	June 19, 1877	847	256	11	1104
193,109	Boynton, Edward S., New York, N. Y. Book-binding	July 17, 1877	582	175	12	107
197,088	Boynton, John F., Syracuse, N. Y. Ornamentation of the surface of hard material	Nov. 13, 1877	376		12	822
	Boynton, Nathan S., *et al.* (*See* Lecture, Francis, assignor.)					
189,690	Boynton, Nathan S., assignor to W. L. Bancroft, J. Goulden, and N. S. Boynton, Port Huron, Mich. Ladder	Apr. 17, 1877	693	214	11	665
197,324	Boynton, Nathan S., assignor to self, W. L. Bancroft, and J. Goulden, Port Huron, Mich. Fireman's ladder	Nov. 20, 1877	631	186	12	867
7,637	Boynton, Nathaniel A., New York, N. Y., assignor to self, H. A. and H. T. Richardson. Cooking-stove (Reissue)	Apr. 24, 1877	1176	355	11	736
197,819	Boynton, Nathaniel A., New York, N. Y. Heating-stove	Dec. 4, 1877	112	34, 35	12	962
197,203	Boynton, Newell M., assignor to Loring & Blake Organ Company, Worcester, Mass. Organ stop-action	Nov. 20, 1877	510	150	12	879
	Boynton, William. (*See* Lewis & Boynton.)					
	Same. (*See* Lewis, Daniel L., assignor.)					
197,759	Bozérian, Eugène E. G., Paris, France. Motor	Dec. 4, 1877	57	18	12	954
191,508	Bozérian, Gaston E. E., Paris, France. Motor	May 29, 1877	1437	433	11	966
	Bozorth, John. (*See* Perkins & Bozorth.)					
198,074	Brace, William H., Nunda, N. Y. Thill-coupling	Dec. 11, 1877	366	114	12	1009
195,335	Bracher, Thomas W., New York, N. Y. Ventilator for windows	Sept. 18, 1877	695	178	12	501
198,184	Brackebush, Charles J., Indianapolis, Ind. Carriage-top iron	Dec. 18, 1877	498	155	12	1033
	Bracket, John F. (*See* Johnson & Bracket.)					
	Same. (*See* Mason & Bracket.)					
196,133	Brackett, Albert A., Milton, Mass. Apparatus for removing card-teeth	Oct. 16, 1877	478	139	12	644
189,600	Bracy, William H., Boston, Mass. Watch-winding device	Apr. 17, 1877	606	168	11	654
196,723	Brada, Charles, New York, N. Y. Rocking-chair	Oct. 23, 1877	771	223	12	694
192,108	Braddock, Edward I., assignor to S. Sewall, jr., and G. A. Marden, Lowell, Mass. Animal-trap	June 19, 1877	669	186	11	1074
189,993	Bradford, Addison, Amsterdam, N. Y. Indicater for electric burglar-alarm	Apr. 24, 1877	1013	310	11	715
	Bradford, Charles S. (*See* Rowe, James H., assignor.)					
	Bradford, Charles S., jr., *et al.* (*See* Brown, John H., assignor.)					
191,750	Bradford, Erastus F., and V. R. Peirce, Boston, Mass. Sewing-machine trimmer	June 12, 1877	234	74	11	1013
	Bradford, George H. (*See* Dillon & Cleary, assignor.)					
	Same. same (Reissue.)					
	Bradley & Hubbard Manufacturing Company. (*See* Evarts, John A., assignor.)					
	Same. same (Reissue.)					
	Bradley & Hubbard Manufacturing Company, *et al.* (*See* Hull, Liverus, assignor). (Reissue.)					
	Bradley, Ahaz. (*See* Sweezy, George P., assignor.)					
7,910	Bradley, Byron C., Chicago, Ill. Wrench (Reissue)	Oct. 16, 1877	629	181	12	664
186,409	Same. Axle for sulky and gang plows	Jan. 23, 1877	622	190	11	117
	Bradley, Charles W. (*See* Peacock & Bradley.)					
	Bradley, Christopher C. (*See* Warner, Robert D., assignor.)					
7,831	Bradley, Christopher C., Syracuse, N. Y. Harvester (Reissue)	Aug. 7, 1877	229	68	12	265
190,410	Same. Horse hay-rake	May 8, 1877	314	92	11	795
198,505	Bradley, Clara L., San Francisco, Cal. Under-suit	Dec. 25, 1877	835	254	12	1091
192,412	Bradley, DeWitt V., West Haven, Conn. Buckle	June 26, 1877	972	285	11	1130
194,984	Bradley, Edwin M., Cheshire, Conn. Harness-buckle	Sept. 11, 1877	239	73	12	440
192,859	Bradley, Frederick A., New Haven, Conn. Covered nut	July 10, 1877	329	97	12	65
188,577	Bradley, Henry, assignor of one-half interest to J. Scherer, Buffalo, N. Y. Faucet	Mar. 20, 1877	622	192	11	480
193,595	Bradley, Henry M., Bay City, Mich. Combined tube-clamp and wrench for sustaining the lining of artesian wells	July 31, 1877	1097	329	12	195
	Bradley, James. (*See* Bradley, Peter, assignor.)					
196,557	Bradley, James J., assignor to G. W. Hubbell, E. Runyon, and J. and F. T. Fearey, Newark, N. J. Circuit-breaker for electro-magnetic burglar-alarms	Oct. 30, 1877	930	269	12	727
189,298	Bradley, Lucien, Chicago, Ill. Coupling for lightning-rods	Apr. 10, 1877	295	94	11	60
195,255	Bradley, Maria, New York, N. Y. Portable lunch-heater	Sept. 18, 1877	533	155	12	491
191,921	Bradley, Peter, assignor of one-half interest to J. Bradley, Philadelphia, Pa. Gas apparatus for heating tools	June 12, 1877	399	124	11	1034
187,092	Bradley, Robert D., Preston, Md. Gas-engine	Feb. 6, 1877	168	55	11	225
187,093	Same. Apparatus for generating motive gas from water	Feb. 6, 1877	171	55, 56	11	226
197,453	Bradley, Sylvester, Bloomington, Ill. Pump-valve	Nov. 27, 1877	774	231	12	898
196,330	Bradley, William P., assignor to self and J. Lowenthal, Mobile, Ala. Refrigerator	Oct. 23, 1877	688	198	12	682
197,990	Bradshaw, George H., Fayetteville, Tenn. Churn	Dec. 11, 1877	291	89	12	996
	Bradshaw, Walter. (*See* Bennett, John M. C., assignor.)					
191,920	Brady, James, Brooklyn, N. Y. Machine for stretching leather belting	June 12, 1877	398	124	11	1034
193,217	Brady, Thomas H., New Britain, Conn. Shears for tinsmiths	July 17, 1877	681	207	12	120
196,624	Same. Bottle-stopper	Oct. 30, 1877	986	288	12	736
186,455	Bragaldo, Mario, New York, N. Y. Elevator for buildings	Jan. 23, 1877	667	204	11	123
194,146	Same. Letter-box	June 9, 1877	651	200	11	1079
	Braidwood, John. (*See* Braidwood, William and J.)					
192,223	Braidwood, William, Mount Vernon, and J. Brainwood, New York, N. Y. Bronzing-machine	June 19, 1877	728	223	11	1089
197,820	Brailly, Ernest E., Bellaire, Ohio. Fountain-pen holder	Dec. 4, 1877	114	35	12	962
186,393	Braislin, John, and J. A. Wood, Crosswicks, N. J. Brick and tile lifter	Jan. 16, 1877	481	148	11	88
7,624	Bramble, William H., Decatur, Ill., assignor to Yale Lock Manufacturing Company, Stamford, Conn. Post-office box (Reissue)	Apr. 24, 1877	1158	352	11	733
	Bramell, Charles D. (*See* Murphy & Bramell.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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7,539	Bramer, Frank, Little Falls, N. Y. Harvester (Reissue)..	Feb. 27, 1877	1064	328	11	372
7,540	Same.....Mowing-machine (Reissue)..	Feb. 27, 1877	1066	329	11	372
196,724	Bramwell, William C., Terre Haute, Ind., assignor to self and E. Ellis. Weighing-mechanism for carding-machines	Oct. 23, 1877	772	223	12	694
	Branch, Joseph W. (*See* Kempin, Edwin W., assignor.)					
	Same..... (*See* Milligan, John F., assignor.)					
	Same..... (*See* Tilton, Edward W., assignor.)					
193,074	Brand, Michael, Chicago, Ill. Beer-cask	July 17, 1877	536	162	12	101
	Brandeis, Giulia. (*See* Brandeis, Ludwig, assignor.)					
197,511	Brandeis, Ludwig, assignor of one-half interest to G. Brandeis, Brooklyn, N. Y. Back-water trap	Nov. 27, 1877	835	249	12	906
190,185	Brandenburg, Jacob, Oxford, Ohio. Mashing-machine	May 1, 1877	75	21	11	756
186,982	Brandon, Alexander, New York, N. Y. Ventilator for railway-car windows.....	Feb. 6, 1877	71	24	11	211
195,204	Brandon, Charles T., assignor of one-half interest to J. S. McMurray and T. R. Fuller, Toronto, Canada. Machine for planing and grooving wash-board legs.	Sept. 18, 1877	477	141	12	483
195,696	Same.....Nailing-machine	Oct. 2, 1877	4	2	12	561
198,185	Brandriff, Alfred, and J. S. Simmerman, Millville, N. J. Thermostatic device for controling dampers, heat, and fire-alarms, &c	Dec. 18, 1877	499	155	12	1034
	Braner, John P. (*See* Meyers, Nicholas, assignor.)					
191,100	Brankman, August, and L. Brightman, Cleveland, Ohio. Machine for drawing and straightening metal rods or bars	May 22, 1877	1025	307	11	904
190,952	Bransom, James L., Chicago, Ill. Knitting-machine.....	May 22, 1877	883	262	11	885
197,089	Brass, Robert, Brooklyn, N. Y. Feed-bag	Nov. 13, 1877	377	111	12	822
194,574	Bratschi, Amiel, Portersville, Pa. Wagon-jack	Aug. 28, 1877	822	244	12	367
	Brauch, John C. (*See* Reimers & Brauch.)					
186,304	Brauer, Ernst, Berlin, Prussia. Friction-wheel.....	Jan. 16, 1877	482	148	11	88
194,409	Braun, John, Philadelphia, Pa. Machine for bending metal plates.....	Aug. 21, 1877	647	194	12	335
195,336	Same.....Lawn-mower	Sept. 18, 1877	606	178	12	501
194,214	Braunhold, Henry, New York, N. Y. Machine for polishing paper, &c.....	Aug. 14, 1877	442	134, 135	12	300
	Brauns, August, *et al.* (*See* Van Wicklen, Daniel, assignor.)					
	Braunsdorf & Co., J. E. (*See* Braunsdorf & Kaiser, assignors.)					
187,806	Braunsdorf, Julius E., and C. Kaiser, Pearl River, N. Y., assignors to J. E. Braunsdorf & Co. Printing-press	Feb. 27, 1877	905	281, 282	11	351
195,337	Braunstein, Charles B., Cincinnati, Ohio. Drinking-glass	Sept. 18, 1877	607	178	12	501
	Brawley, C. Homer, *et al.* (*See* Morris, William H. H., assignor.)					
195,697	Brawley, C. Homer, Meadville, and D. C. Brawley, Petrolia, Pa. Ball-wheel and operating mechanism.....	Oct. 2, 1877	6	2	12	561
	Brawley, Dewitt C. (*See* Brawley, C. Homer and D. C.)					
	Brawley, Dewitt C., *et al.* (*See* Morris, William H. H., assignor.)					
192,561	Brawley, Dewitt C., Petrolia, Pa. Sand-pump reel	July 3, 1877	5	2	12	13
193,394	Same.....same	July 24, 1877	880	269	12	155
193,475	Same.....same	July 24, 1877	955	291	12	166
194,215	Same.....Bailer for oil-wells.....	Aug. 14, 1877	443	135	12	300
196,625	Same.....same	Oct. 30, 1877	987	288	12	736
	Bray, Mellen. (*See* Dawes, Alfred, assignor.)					
188,772	Bray, Mellen, Newton, Mass. Machine for making rivets	Mar. 27, 1877	820	251	11	515
188,773	Same.....Machine for drilling the shanks of rivets	Mar. 27, 1877	825	251, 252	11	516
186,454	Bray, Morris P., Birmingham, Conn. Trimming	Jan. 23, 1877	667	204	11	123
190,274	Same.....Corset.....	May 1, 1877	161	47	11	767
192,894	Bray, Morris P., Birmingham assignor of one-half interest to M. Adler, New Haven, Conn. Corset-stay	July 10, 1877	361	106	12	69
186,792	Braymer, Frederick A., jr., Chicago, Ill., assignor of one-half interest to O. A. Peck. Cigar show-box.....	Jan. 30, 1877	991	308	11	176
189,299	Braymer, Frederick A., jr., assignor of one-half interest to O. A. Peck, Chicago, Ill. Cover for tobacco-pails.....	Apr. 10, 1877	296	94	11	60
190,411	Brayton, George B., Exeter, N. H. Piston for air and gas engines.....	May 8, 1877	315	92	11	796
190,275	Brayton, Robert, D. June, and O. S. French, Fremont, Ohio. Spark-arrester	May 1, 1877	162	47	11	767
189,300	Breakey, Thomas E., Homer, Mich. Automatic gate.....	Apr. 10, 1877	297	94	11	60
187,094	Brear, Abel, Saugatuck, Conn. Attaching buttons to cards	Feb. 6, 1877	172	56	11	226
186,456	Breckenridge, Elias K., West Meriden, Conn. Carpet-sweeper.....	Jan. 23, 1877	668	205	11	123
192,617	Breckenridge, Orlo, Westfield, Mass. Whip	July 3, 1877	64	19	12	21
	Breed, Daniel. (*See* Alexander & Breed.)					
187,448	Breed, David R., Saint Paul, Minn. Scrap-book	Feb. 20, 1877	547	169	11	295
198,339	Breeden, Charles C., and O. T. Wheeler, Bedford, Ky. Rotary cultivator	Dec. 18, 1877	655	199	12	1056
191,645	Breese, Theodore F., Meriden, Conn. Labeled wardrobe-hook.....	June 5, 1877	126	39	11	993
	Brehmer, Hugo, *et al.* (*See* Heyl & Brehmer.)					
193,636	Breinig, David E., Brooklyn, N. Y., assignor to Bridgeport Wood-Finishing Company, Bridgeport, Conn. Paint.....	July 31, 1877	1139		12	201
191,644	Breinig, Granville M., Brooklyn, N. Y. Barrel-head	June 5, 1877	126	39	11	993
193,075	Brennam, Thomas, and J. Taylor, Louisville, and J. T. Lyman, Jefferson County, Kentucky. Grain-drill.....	July 17, 1877	536	162	12	101
188,578	Brennan, Edward P., Doylestown, Pa. Snap-hook.....	Mar. 20, 1877	623	192	11	480
186,000	Brennan, Michael, East Cambridge, Mass. Folding foot-rest for chairs	Jan. 9, 1877	193	59	11	43
	Brennan, Thomas. (*See* Munn, Clark & Brennan.)					
196,134	Brennand, James, Hyde Park, Mass., and T. Hampson, Wigan, Great Britian, assignors of one-third interest to J. P. Sherman, Hyde Park, Mass. Loom-picker.....	Oct. 16, 1877	479	139	12	644
187,591	Brenner, Moses, Baltimore, Md. Can for preserving meat.....	Feb. 20, 1877	675	210	11	312
188,774	Same.....Preserving and putting up meat.....	Mar. 27, 1877	832	253	11	516
188,579	Brenner, Peter, Augusta, Ga. Stringing piano-fortes.....	Mar. 20, 1877	623	192	11	486
188,098	Brett, Mathew D, Boulder, Colo. Shaft-furnace for treating ores	Mar. 6, 1877	129	39	11	308
	Brettell, Francis S. (*See* Brettell, George E., assignor.)					
187,960	Brettell, George E., assignor to F. S. Brettell, Rochester, N. Y. Iron-planer	Mar. 6, 1877	4	1	11	381
	Brewer, B. B. (*See* Cowles, Samuel H., assignor.)					
	Brewer, C. D. (*See* Dawson, Frank, assignor.)					
198,340	Brewer, Charles G., Penn Yan, N. Y. Apparatus for generating illuminating gas.....	Dec. 18, 1877	656	199, 200	12	1056
189,424	Brewer, Elias, Boston, Mass. Hydraulic elevator.....	Apr. 10, 1877	419	131	11	612
198,533	Brewer, John, Brooklyn, N. Y., assignor to J. G. Reynolds, Elizabeth, N. J. Spring hinge	Dec. 25, 1877	860	262	12	1095
	Brewer, John M. (*See* Rogers, Charles J., assignor.)					

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
197,760	Brewer, Lloyd T., Saint Clair, assignor of one-half interest to T. W. Thomas, Frackville, Pa. Tobacco-box	Dec. 4, 1877	58	19	12	954
	Brewster & Co., J. B. (*See* Wood, Thomas H., assignor.)					
	Brewster, Brothers & Co. (*See* Gilbert, Thomas S., assignor.)					
186,227	Brewster, James B., New York, N. Y. Trussed axle-tree	Jan. 16, 1877	416	127	11	79
191,101	Brewster, Nathan T., and A. D. Neher, Roseville, Cal. Cultivator	May 22, 1877	1027	307	11	904
193,218	Brewster, Orville, Warren, Pa. Spring bed-bottom	July 17, 1877	682	208	12	121
192,322	Brewster, William W., Revere, Mass. Planing-machine	June 26, 1877	863	261	11	1119
187,252	Brice, William A., London, England. Advertising device	Feb. 13, 1877	335	107	11	260
191,043	Same.....Marine-engine governor	May 22, 1877	955	283	11	894
187,701	Bricker, William H., Chambersburg, Pa. Chair-commode	Feb. 27, 1877	803	249	11	338
191,564	Brickley, Charles A., Providence, R. I. Towel-rack	June 5, 1877	53	16	11	983
195,567	Bridenbecker, Frank W., Schuyler, N. Y. Mail-bag crane	Sept. 25, 1877	837	249	12	543
187,700	Bridenthal, Harry H., jr., Latrobe, Pa. Harvester-rake	Feb. 27, 1877	800	249	11	337
193,637	Same.....Grain-binder	July 21, 1877	1140	{341 342}	12	201
196,626	Bridenthal, Henry H., jr., Westmoreland County, Pa. Grain-binder	Oct. 30, 1877	989	{288 289}	12	736
	Bridesburg Manufacturing Company. (*See* Rothwell, John, assignor.)					
187,996	Bridge, Edward W., assignor of one-half interest to F. G. Pincus, Philadelphia, Pa. Chin-rest for violins	Mar. 6, 1877	41	11	11	386
194,645	Bridge, Edward W., assignor to F. G. Pincus, Philadelphia, Pa. Toy clock	Aug. 28, 1877	881	263	12	376
	Bridge, Lewis. (*See* Stuart & Bridge.)					
	Bridgeport Wood-Finishing Company. (*See* Breinig, David E., assignor.)					
190,815	Bridges, Empson C. L., assignor to J. A. Lee, Brick Church, Tenn. Combined cotton chopper and scraper	May 15, 1877	730	216	11	857
189,183	Bridget, John F., Washington, D. C. Side-bar spring-vehicle	Apr. 3, 1877	146	52	11	579
188,580	Bridgman, Almon, and J. L. Perry, Berlin, Wis. Wood-polishing machine	Mar. 20, 1877	624	193	11	480
189,691	Briere, Jules, Alençon, France. Nursing-bottle	Apr. 17, 1877	694	214	11	665
	Briggs, Andrew H. (*See* Elterich, Charles, assignor.)					
	Briggs, Hiram G. (*See* Briggs, Philander W., and H. G.)					
189,838	Briggs, Joseph M., J. F. Greene, and C. Radikin, Providence, R. I. Slasher	Apr. 24, 1877	867	264	11	696
197,821	Brigge, Lucius, Grosvenor Dale, Conn. Lap-robe	Dec. 4, 1877	115	35	12	962
193,802	Briggs, Nicholas A., and E. H. Knowles, Shaker Village, N. H., assignors to said Briggs. Washing-machine	Aug. 7, 1877	7	2	12	235
198,271	Briggs, Philander W. and H. G., Howell, Mich. Grain-drill	Dec. 18, 1877	001	182	12	1018
198,484	Briggs, Wellington S., Ottumwa, Iowa. Fountain-pen	Dec. 25, 1877	814	247	12	1088
191,223	Briggs, William E., Chicago, Ill. Game apparatus	May 29, 1877	1161	348	11	931
189,839	Brigham, Frederick, Warren, Mass. Drip-cup for faucets	Apr. 24, 1877	868	265	11	696
195,685	Brigham, H. De Lancy, Unadilla, N. Y. Bench-drill	Sept. 11, 1877	344	104	12	455
	Brigham, Jason S. (*See* Cushman & Brigham.)					
185,817	Bright, Richard A., jr., Providence, R. I. Cigar-machine	Jan. 2, 1877	5	2	11	9
191,646	Brightman, Albert, New Bedford, Mass. Stove-pipe damper	June 5, 1877	127	39	11	993
189,692	Brightman, John C., Fall River, Mass. Horseshoe	Apr. 17, 1877	695	294	11	665
	Brightman, Latham. (*See* Brankman & Brightman.)					
187,997	Brightmann, Henry, Taunton, Mass. Weather-strip	Mar. 6, 1877	41	11	11	386
	Brill & Co., J. G. (*See* Pyott, Louis T., assignor.)					
	Brink, Alfred. (*See* La Rue, Silas H., assignor.)					
195,973	Brinker, Charles, Philadelphia, Pa. Cigar-holder	Oct. 9, 1877	296	83	12	610
188,336	Brinkerhoff, George F., Bucyrus, Ohio. Whip-socket	Mar. 13, 1877	377	118	11	437
	Brinkerhoff, J. (*See* Miller, Benjamin F., assignor	(Reissue.)				
7,830	Brinkerhoff, Jacob, Auburn, N. Y. Barbed fence	(Reissue)	Aug. 7, 1877	228	67	12
7,861	Brinkerhoff, Jacob, Auburn, N. Y., assignor, by mesne assignments, to Empire Wringer Company. Wringer	(Reissue)	Aug. 28, 1877	997	295	12
186,922	Brinkerhoff, Jacob, Auburn, N. Y. Metallic barbed fence	Feb. 6, 1877	3	2	11	203
189,918	Same.....Metallic fence-post	Apr. 24, 1877	944	289	11	706
193,076	Brinkerhoff, Truman S., Auburn, N. Y. Vaccinating instrument	July 17, 1877	538	163	12	101
193,219	Brintnall, Thomas M., New York, N. Y. Cloth measuring machine	July 17, 1877	682	208	12	121
197,715	Brintnall, Thomas M., New York, N. Y., and R. C. Weilbacher, Newark, N. J. Lamp-burner	Dec. 4, 1877	6	2	12	947
198,186	Brinton, Caleb, Chicago, Ill. Furniture-caster	Dec. 18, 1877	502	155	12	1034
195,086	Brintzinghoffer, George, Philadelphia, Pa. Brush-holder	Sept. 11, 1877	345	104	12	455
198,075	Brisbane, William, Philadelphia, Pa. Asbestus cigarette	Dec. 11, 1877	366	114	12	1000
198,341	Same.....Smoking-tube	Dec. 18, 1877	658	200	12	1056
186,105	Bristol, Charles B., New Haven, Conn. Strap-hinge	Jan. 9, 1877	292	88	11	56
186,983	Bristol, Charles B., assignor to W. and E. F. Fitch, New Haven, Conn. Trace-carrier	Feb. 6, 1877	73	24	11	211
196,187	Bristol, Charles B., New Haven, Conn. Pulley-block	Oct. 16, 1877	527	153	12	651
	Bristol, Timothy M. (*See* Dunham, Henry, assignor.)					
191,923	Britton, Mason, Wauseon, Ohio. Protection-tip for oar-blades	June 12, 1877	491	125	11	1035
	Broad, Charles E., *et al.* (*See* Thomas, James, assignor.)					
192,733	Broadbent, Sidney, Scranton, Pa. Tooth for coal-breakers	July 3, 1877	174	50	12	37
192,734	Same.....Extractor for the teeth of coal-breakers	July 3, 1877	175	51	12	37
197,960	Broadmeadow, John P., assignor of one-half interest to H. L. Eames, Bridgeport, Conn. Foundery apparatus	Dec. 11, 1877	200	80, 81	12	992
	Broadwell, De Witt C. (*See* Good, Levi, assignor.)					
190,276	Brobsten, Dan, Chicago, Ill. Hoisting apparatus	May 1, 1877	163	48	11	767
	Brock, J. W. (*See* Lawler, James J., assignor.)					
	Brock, Matthias. (*See* Copeland & Brock.)					
	Same.....(*See* Copeland, Woodward & Brock.)					
188,010	Brock, Orvill M., Monroeton, Pa. Spice-box	Mar. 6, 1877	86	25	11	392
188,099	Brock, William E., assignor to Daws & Fanning, New York, N. Y. Umbrella-runner	Mar. 6, 1877	130	39	11	398
192,673	Brock, William E., New York, N. Y. Machine for manufacturing compound lumber	July 3, 1877	128	35	12	29
193,220	Brock, William E., New York, N. Y., assignor to J. Russell Cutlery Company, Turner's Falls, Mass. Apple parer and corer	July 17, 1877	683	208	12	121
195,087	Brock, William E., assignor to J. J. Tower, New York, N. Y. Culinary utensil for broiling, toasting, &c	Sept. 11, 1877	345	104	12	455
195,338	Brock, William E., New York, N. Y. Manufacturing tongued-and-grooved veneers	Sept. 18, 1877	603	179	12	501
196,188	Brock, William E., New York, assignor to J. J. Tower, Brooklyn, N. Y. Combined bevel, square, compass, caliper, &c	Oct. 16, 1877	523	153	12	651
192,895	Brockett, Atwater E., Branford, Conn. Draw-knife	July 10, 1877	361	107	12	69
194,985	Same.....Whiffletree	Sept. 11, 1877	240	73	12	441
186,457	Broduax, David W., Rockdale, Tex. Tug-attachment for harness	Jan. 23, 1877	670	205	11	123
197,822	Broduax, Edmond W., and B. Cohen, Eutaw, Ala. Spring motor	Dec. 4, 1877	115	36	12	962
189,995	Broemser, John G., Saint Louis, Mo. Blind-slat adjuster	Apr. 24, 1877	1011	310	11	715

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
187,253	Brokaw, Isaac, Litchfield, Ill. Tilting gate	Feb. 13, 1877	336	107	11	200
189,996	Brombacher, Carl N., Portsmouth, Ohio. Slate	Apr. 24, 1877	1015	311	11	716
192,483	Bromley, John, Macon, assignor of part interest to S. E. Smith and J. M. Ellis, Atlanta, Ga. Apparatus for boiling sugar-cane	June 26, 1877	1011	306	11	1138
190,541	Bromwell, Henry H., Chicago, Ill. Cigarette-machine	May 8, 1877	442	130	11	812
198,076	Bronaugh, David, Kentucky Town, Tex. Cotton-planter	Dec. 11, 1877	367	114	12	1009
189,994	Bronson, Adelbert E., Chicago, Ill. Barbed-wire fence	Apr. 24, 1877	1013	310	11	715
	Bronson, Edward D., *et al.* (*See* Lipe, Charles E., assignor.)					
187,592	Bronson, J. Hobart, assignor to Oakville Company, Waterbury, Conn. Pin-package	Feb. 20, 1877	676	210	11	312
	Bronson, L. N. (*See* Kiehle, Jonas, assignor.)					
197,594	Brook, John A., assignor to Mallory, Wheeler & Co., New Haven, Conn. Reversible latch	Nov. 27, 1877	920	274	12	919
191,102	Brooke, Homer, Brooklyn, assignor to B. B. Schneider, New York, N. Y. Glass mold for shade-holders and shades	May 22, 1877	1028	307	11	904
191,103	Brooke, Homer, assignor to B. B. Schneider, New York, N. Y. Mold for glass shades, &c.	May 22, 1877	1029	307	11	904
191,224	Brooke, Homer, Brooklyn, assignor to B. B. Schneider, New York, N. Y. Manufacture of glass shades	May 29, 1877	1162	348	11	931
190,277	Brooking, Andrew F., Milton, Ill. Reciprocating churn	May 1, 1877	165	48	11	767
191,649	Brookmann, Anton, Chicago, Ill., assignor to F. W. Ludwig, Cincinnati, Ohio. Button-fastening	June 5, 1877	131	41	11	994
192,224	Brookmire, James H., Saint Louis, Mo. Apparatus for cleaning and polishing coffee	June 19, 1877	730	223	11	1090
194,889	Brooks, Albert A., Battle Creek, assignor of one-half interest to H. D. Crooker, Calhoun County, Michigan. Gate	Sept. 4, 1877	129	40	12	418
196,069	Brooks, Albert A., assignor of one-half interest to H. D. Crooker, Battle Creek, Mich. Steam-cooker	Oct. 11, 1877	401	116	12	633
	Brooks, Allen T. (*See* Lindley, Chambers Z., assignor.)					
187,095	Brooks, Caroline S., Helena, Ark. Producing lubricated molds in plaster	Feb. 6, 1877	173		11	226
194,888	Brooks, Edward A., and R. J. Jordon, Bowenville, Ga. Baling-press	Sept. 4, 1877	129	40	12	418
192,735	Brooks, Edward J., New York, N. Y. Metallic seal	July 3, 1877	175	51	12	37
193,221	Brooks, Franklin W., assignor of one-half interest to W. Fullerton, New York, N. Y. Bank-checks, &c	July 17, 1877	687	208	12	121
195,974	Brooks, Franklin W., New York, N. Y. Postal card	Oct. 9, 1877	296	83	12	610
	Brooks, Hiram W., *et al.* (*See* Shaw, Ai. B., assignor.)					
190,542	Brooks, Horatio G., Dunkirk, N. Y. Tank and freight car	May 8, 1877	443	{130 131	}11	812
	Brooks, James W. (*See* Green, Elisha T., assignor) (Reissue.)					
	Brooks, J. J., *et al.* (*See* Shipherd, William C., assignor.)					
190,543	Brooks, John, and T. W. Bearcock, Wyoming; said Bearcock assignor to F. Balcom, Pittston, Pa. Revolving fire-arm	May 8, 1877	445	131	11	812
186,458	Brooks, John S., Brooklyn, N. Y. Stove-board	Jan. 23, 1877	671	205	11	123
196,331	Brooks, John T., Ithaca, N. Y. Endless-track wheel	Oct. 23, 1877	689	198	12	682
196,135	Brooks, Norman, Clifton, Kans. Button-swivel	Oct. 16, 1877	480	139	12	644
	Brooks, Silas N., administrator. (*See* Yale, Linus, jr.) (Reissue.)					
	Brooks, Thomas A. (*See* Siler & Brooks.)					
192,813	Brooks, William D., and R. Gornall, Baltimore, Md. Soldering-machine	July 11, 1877	285	83	12	59
	Brookville Paper Company. (*See* Speer, Edward D., assignor.)					
195,205	Broom, George C., Cleveland, Ohio. Feed-trough for horses	Sept. 18, 1877	479	142	12	483
190,544	Broom, Hugh, assignor of one-half interest to H. B. Huffman, Cambridge, Ohio. Curtain-fixture	May 8, 1877	446	132	11	812
	Broomell, Henry. (*See* Pownall & Broomell.)					
192,484	Brophy, William P., Bloomington, Ill. Magazine heating stove	June 26, 1877	1011	306	11	1138
189,182	Broseker, William, assignor of one-half interest to A. J. La Fleur, Baltimore, Md. Cigar-wrapper	Apr. 3, 1877	145	52	11	579
191,922	Broseker, William, assignor of two-thirds interest to A. J. La Fleur and J. Turner, Baltimore, Md. Cigar-machine	June 12, 1877	400	124	11	1034
190,412	Brossell, Hubert, Indianapolis, Ind. Boot and shoe	May 8, 1877	316	93	11	796
185,891	Brotherhood, Peter, Notting Hill, England. Governor for steam-engines	Jan. 2, 1877	77	23	11	18
196,070	Same.....Triple-cylinder steam-engine	Oct. 16, 1877	401	{116 117	}12	634
196,189	Same.....Rotary valve for steam-engines	Oct. 16, 1877	529	153	12	651
	Brotherton, James, *et al.* (*See* Martin, Ara T., assignor.)					
186,106	Brothwell, John G., assignor to Turner and Seymour Manufacturing Company, Wolcottville, Conn. Collar for lamps	Jan. 9, 1877	292	88	11	56
190,186	Brott, John R., Seneca, N. Y. Swinging gate	May 1, 1877	76	21	11	756
190,734	Brough, Eliza, Greenville, Mich. Reciprocating churn	May 15, 1877	662	196	11	848
197,991	Same.....Churn	Dec. 11, 1877	292	90	12	997
194,216	Brougham, Stephen M., Richmond County, New York. Pen and pencil case	Aug. 14, 1877	444	135	12	301
193,687	Browell, Jeremiah, San Francisco, Cal. Sectional chimney	July 31, 1877	1994	357	12	208
192,109	Brower, Bloomfield, New York, and J. F. Adams, Irvington, N. Y. Temporary binder	June 19, 1877	610	186	11	1074
194,410	Brower, Bloomfield, New York, N. Y. Writing-tablet	Aug. 21, 1877	648	195	12	335
	Brower, Charles R. (*See* Moffatt, Richard R., assignor.)					
192,147	Brower, Emmett H., Carson City, Mich. Bench-vise	June 19, 1877	654	200	11	1070
190,118	Brower, Jonathan P., Cornstalk, Ind. Corn-stalk cutter	May 1, 1877	5	2	11	747
	Brown & Brothers. (*See* White, Le Roys, assignor.)					
	Same.....same (Reissue.)					
	Brown, A. A., *et al.* (*See* Whitaker, John A., assignor.)					
194,764	Brown, Aaron B., Worcester, Mass. Atmospheric exhauster	Sept. 4, 1877	7	2	12	401
186,661	Brown, Adna, Springfield, Vt. Cloth-measuring machine	Jan. 30, 1877	866	268	11	159
	Brown, Alexander T. (*See* Kinyon & Brown.)					
190,545	Brown, Alvia K., Newton, Iowa. Steamer for cooking food	May 8, 1877	447	132	11	812
190,736	Brown, Anderson, and A. G. Huey, assignor of one-third interest to B. N. Curtiss, Bloomington, Ill. Nut-lock	May 15, 1877	663	197	11	848
	Brown, Annie A., *et al.* (*See* Parker, Henry, assignor.)					
	Brown, Benjamin F., trustee. (*See* Shaw, Nelson, assignor) (Reissue.)					
	Brown, Benjamin F. (*See* Valentine, Samuel W., assignor.)					
190,187	Brown, Benjamin R., Petersburg, Va. Water-closet protector	May 1, 1877	77	21	11	756
197,992	Brown, Burlington D., Shamrock, Mo. Invalid-bed attachment	Dec. 11, 1877	293	90	12	997
190,703	Brown, Byron C., Clinton, Iowa. Machine for sawing shingles	May 15, 1877	630	187	11	813
190,851	Brown, Charles, Meadville, Pa. Paint composition	May 22, 1877	884		11	885
197,597	Brown, Charles, New York, N. Y. Hay and feed bale	Nov. 27, 1877	923	275	12	919
	Brown, Charles A. (*See* Flynn & Brown.)					
197,593	Brown, Charles A., Troy, N. Y. Convertible goods-box	Nov. 27, 1877	921	275	12	919

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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194,986	Brown, Charles D., Portland, Me. Moth-proof paper from cedar wood	Sept. 11, 1877	241		12	441
	Brown, Charles E. (*See* Vermillion, John W., assignor.)					
	Brown, Charles N. (*See* Brown, Ira S. and C. N.)					
	Brown, Charles R. (*See* Moffatt, Richard R., assignor.)					
193,748	Brown, Curtis P., Wheeling, W. Va. Device for applying edge-tools to sharpeners	July 31, 1877	1243	374	12	216
186,536	Brown, Daniel W., assignor to Providence Tool Company, Providence, R. I. Sewing-machine shuttle	Jan. 23, 1877	740	227	11	133
190,413	Brown, David W., New Comerstown, Ohio. Lifting-jack	May 8, 1877	317	93	11	796
	Brown, Edward. (*See* Wilson, Joseph S., assignor.)					
7,702	Brown, Edward, Philadelphia, Pa. Pyrometer (Reissue)	May 29, 1877	1443	434	11	966
186,793	Brown, E. Parmly, Flushing, N. Y. Case for dental instruments	Jan. 30, 1877	992	308	11	176
195,746	Brown, Erastus P., Farwell, Mich. Sand-band for vehicle-hubs	Oct. 2, 1877	56	17	12	569
186,535	Brown, Felix, New York, N. Y. Caloric-engine	Jan. 23, 1877	739	{226 227}	11	133
187,998	Brown, Felix S., Jersey City, N. J. Umbrella-runner	Mar. 6, 1877	42	11	11	386
193,477	Brown, Franklin H., by W. P. Brown, administrator, Indianapolis, Ind. Sewing-machine	July 24, 1877	956	291	12	167
186,794	Brown, Frederick, and J. Smith, Como Station, Wyo. Rail-joint and fish-plate	Jan. 30, 1877	992	308	11	176
	Brown, George, *et al.* (*See* Knowles, Proctor, and Pendleton, assignors.)					
187,504	Brown, George C., Cleveland, Ohio. Mangle	Feb. 20, 1877	601	186	11	302
	Brown, George W. (*See* Le Row, Jacob H., assignor.)					
195,916	Brown, George W., Damariscotta, Me. Barrel-holder and skid	Oct. 9, 1877	234	67	12	602
198,272	Brown, George W., Providence, R. I. Foot-power machine	Dec. 18, 1877	602	182	12	1048
190,735	Brown, Henry A., Toledo, Ohio. Forming blanks for boot-jacks	May 15, 1877	663	196	11	848
	Brown, Henry C. (*See* Hubbard, Lyman D., assignor.)					
	Brown, Hiley. (*See* Sumpter & Brown.)					
191,565	Brown, Hiram L., Shortsville, N. Y. Seed-drill	June 5, 1877	53	16	11	983
187,702	Brown, Horace F., Corning, N. Y. Coal-cutting machine	Feb. 27, 1877	804	{249 250}	11	338
197,090	Brown, Horace F., Chicago, Ill. Machine for mining and undercutting coal	Nov. 13, 1877	378	111	12	822
197,325	Brown, Ira S. and C. N., Providence, R. I. Planing-saw	Nov. 20, 1877	634	187	12	868
187,593	Brown, Isaac P., jr., and A. A. Sanborn, assignors to C. P. Zimmerman, Newark, N. J. Emery grinding-wheel	Feb. 20, 1877	677	211	11	312
190,278	Brown, James H., Stewartsville, Mo. Washing-machine	May 1, 1877	165	48	11	767
	Brown, James O. (*See* Lomont & Brown.)					
190,701	Brown, James O., assignor of part interest to E. Bayliss, P. F. Hodgee, and F. T. Lomont, said Hodges assignor to said Bayliss, Massillon, Ohio. Hand-binder	May 15, 1877	626	186	11	843
190,702	Same same	May 15, 1877	628	187	11	843
	Brown, James W. (*See* Allan & Brown.)					
189,184	Brown, James W., Port Huron, Mich. Automatic telegraphy	Apr. 3, 1877	146	52	11	579
197,091	Brown, John, Providence, R. I. Game apparatus	Nov. 13, 1877	381	112	12	822
193,478	Brown, John D., and J. A. Roberts, Kearney, Mo. Reciprocating churn	July 24, 1877	958	271	12	167
196,872	Brown, John F., assignor to Cornelius & Co., Philadelphia, Pa. Extension-chandelier.	Nov. 6, 1877	143	43	12	780
	Brown, John H. (*See* Buschmann & Brown.)					
185,890	Brown, John H., Brooklyn, assignor to R. Ball, New York, N. Y., and C. S. Bradford, jr., West Chester, Pa. Fruit-drier	Jan. 2, 1877	76	23	11	18
192,860	Brown, John H., Brooklyn, N. Y. Plaiting-machine	July 10, 1877	330	97	12	65
197,244	Brown, John H., assignor to J. Goodfellow, New York, N. Y. Passenger-register	Nov. 20, 1877	549	162	12	822
198,187	Brown, Jonathan, Aylmer, Canada. Thrashing-machine	Dec. 18, 1877	504	156	12	1034
	Brown, Joseph. (*See* Brown, McFarland & Brown.)					
	Brown, Joseph H. (*See* Salisbury, Silas C., assignor.)					
196,517	Brown, Joseph M., Florence, Tex. Walking planter	Oct. 30, 1877	891	257	12	721
187,770	Brown, Joseph R., deceased, by C. D. Owen and L. Sharpe, executors, Providence, R. I. Grinding-machine	Feb. 27, 1877	868	{270 271}	11	346
186,984	Brown, Julius, New York, N. Y., assignor to self and M. Leipziger. Artificial feather.	Feb. 6, 1877	73	23	11	211
196,136	Brown, Laurance, Chatham, New Brunswick. Bonyant propelling-wheel for vessels	Oct. 16, 1877	480	139	12	614
195,880	Brown, Lewis S., Lyndon Station, Ohio. Nut-lock for fish-bars on railways	Oct. 9, 1877	196	56	12	597
	Brown, Lucien, *et al.* (*See* Knowles, Proctor & Pendleton, assignors.)					
190,546	Brown, Mercileus P., Lexington, assignor of one-half interest to W. M. Jordan, Lafayette, Mo. Corn-gatherer	May 8, 1877	447	132	11	813
193,918	Brown, Michael, F. J. McFarland, and J. Brown, Wapakoneta, Ohio. Churn made of bent wood	Aug. 7, 1877	116	37	12	251
	Brown, Milton, *et al.* (*See* Clark, George, assignor.)					
195,441	Brown, Nathan, New Albany, Miss. Blacksmith's nipper and clincher	Sept. 25, 1877	718	212	12	526
	Brown, Nelson H. (*See* Van Hoesen & Brown) (Reissue.)					
	Brown, Noah W. (*See* Wooden, Lewis H., assignor.)					
191,828	Brown, Orlando C., Cardington, Ohio. Apparatus for framing bills, show-cards, &c.	June 12, 1877	316	97	11	1023
187,096	Brown, Perry, Milton, Ky. Car-coupling	Feb. 6, 1877	173	56	11	226
191,796	Brown, Rufus G., Waltham, Mass. Steam-heater	June 12, 1877	277	86	11	1019
191,647	Brown, Seymour C., assignor of one-half interest to J. D. Scheltz, Philadelphia, Pa. Straw-braid-sewing machine	June 5, 1877	127	40	11	993
	Brown, S. N., jr. (*See* Bliss, Ebenezer J., assignor.)					
196,558	Brown, Thomas H., jr., assignor to S. Clary, Chicago, Ill. Letter-file	Oct. 30, 1877	931	270	12	727
	Brown, Thomas R., *et al.* (*See* Genth & Barker, assignors.)					
	Brown, Thomas R. (*See* Ubil, Taylor, assignor.)					
	Brown, Timothy D. (*See* Peltier & Brown.)					
	Brown, William. (*See* Hobart, Edward F., assignor.)					
	Same (*See* Wasmer, Jacob, assignor.)					
186,660	Brown, William, 2d, Winchendon, Mass. Road-scraper	Jan. 30, 1877	865	267	11	159
196,518	Brown, William, Duncannon, Pa. Lightning-conductor	Oct. 30, 1877	892	257	12	721
197,596	Brown, William, Saint Louis, Mo. Machine for splitting and flaring hoop-iron	Nov. 27, 1877	922	275	12	919
	Brown, William B., *et al.* (*See* Stieniker, Rudolph W., assignor.)					
191,924	Brown, William F., Newark, Ohio. Shirt bosom and collar protector	June 12, 1877	401	125	11	1034
192,896	Brown, William H., Indianapolis, Ind. Sash-fastener	July 10, 1877	362	107	12	69
187,505	Brown, William J., New York, N. Y. Shoe-fastener	Feb. 20, 1877	602	186	11	302
190,816	Brown, William P., Zanesville, Ohio. Coupling for cultivators	May 15, 1877	732	216	11	857
191,648	Same Wagon-gearing	June 5, 1877	130	41	11	993
196,190	Brown, William P., Holland's Store, assignor of one-half interest to J. S. Fowler, Brown's Ferry, S. C. Plow attachment for distributing fertilizers	Oct. 16, 1877	531	154	12	651
189,919	Brownback, James, Limerick Station, and M. Towers, jr., Phœnixville, assignors to March, Brownback & Co., Limerick Station, Pa. Range	Apr. 24, 1877	945	287	11	703
189,693	Browne, Arthur W., Brooklyn, N. Y., assignor to self and W. E. Kelly, New Brunswick, N. J. Governor for engines	Apr. 17, 1877	696	214	11	665

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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193,139	Browne, Charles B., Camillus, N. Y. Book-cover protector	July 17, 1877	606	183	12	110
	Browne, George J. (*See* Trautmann, Ralph, assignor.)					
190,188	Browne, Horatio W., Philadelphia, Pa. Plate-printing press	May 1, 1877	77	21	11	756
193,638	Browne, James W., Brooklyn, assignor to F. W. Griffith and G. P. Byrne, New York, N. Y. Window-ventilator	July 31, 1877	1146	342	12	202
191,751	Browne, J. Vincent, New York, N. Y. Mucilage-holder	June 12, 1877	235	74	11	1013
195,088	Browne, William F., New York, N. Y., assignor to Hydro-carbon Steam-Generating Company. Combined steam and gas generating apparatus	Sept. 11, 1877	346	104, 105	12	456
193,141	Brownell, Charles E., Moodus, Conn. Twisting-spindle for making cordage	July 17, 1877	607	184	12	110
193,140	Brownell, William H., Brooklyn, N. Y. Artists' appliances	July 17, 1877	606	183	12	110
197,761	Same.....Easel for pottery decoration	Dec. 4, 1877	58	19	12	954
196,782	Brownhill, Rowland, W. Walsall, England. Brick-machine	Nov. 6, 1877	44	13, 14	12	767
197,326	Brownson, Ralph, Saint Paul, Minn. Leather-punching machine	Nov. 20, 1877	634	187	12	863
	Bruce, David W. (*See* Mason, Thomas, assignor.)					
	Bruce, Frank. (*See* Bruce, William, assignor.)					
	Bruce, Joseph W. (*See* Humphrey, Henry, assignor.)					
190,704	Bruce, William, assignor to F. Bruce, Minneapolis, Minn. Toy money-box	May 15, 1877	631	187	11	844
	Bruen, John T. (*See* Taylor & Bruen.)					
191,304	Bruen, John T., Brooklyn, N. Y. Wire screw and nut	May 29, 1877	1236	371	11	941
191,399	Same.....Extension chandelier	May 29, 1877	1311	398	11	952
	Bruff, Richard P. (*See* Juslyn, Benjamin F., assignor.)					
	Brule, Diendonne N., *et al.* (*See* Evans, George R., assignor.)					
192,674	Brumby, James R., Marietta, Ga. Adjustable rocking-chair	July 3, 1877	130	36	12	29
192,052	Brumfield, Theodore H., Geddes, N. Y. Carpet-stretcher	June 19, 1877	559	170	11	1067
187,807	Brumley, Samuel, assignor of part interest to E. W. and C. L. Pemberton, Jonesborough, Ind. Shoe-last fastener	Feb. 27, 1877	910	282	11	351
191,797	Brummer, William F., Milwaukee, Wis. Blower for insect-powder	June 12, 1877	278	87	11	1019
187,213	Bruner, Theodor, Richfield, Minn. Bob-sled coupling	Feb. 13, 1877	297	97	11	255
194,029	Same.....Wheel-plow	Aug. 14, 1877	249	74	12	275
189,999	Brunius, Hakon, Jönköping, Sweden. Electro-magnetic railway-signals	Apr. 24, 1877	1022	312, 313, 314	11	716
	Brunner, Burroughs P. (*See* Beauregard, Napoleon, assignor.)					
	Brunner, Charles, *et al.* (*See* Hibbard, Silas H., assignor.)					
190,000	Brunner, John D., Doylestown, Pa. Spring wagon	Apr. 24, 1877	1032	314	11	717
187,999	Brunnert, Friedrich W., New York, N. Y. Till-oven	Mar. 6, 1877	43	11	11	286
197,013	Bruns, John H., R. Laig, and H. Von Dehoen, New York, N. Y. Tap-attachment to beer-barrels	Nov. 13, 1877	293	86	12	810
189,997	Brush, Charles F., Cleveland, Ohio. Magneto-electric machine	Apr. 24, 1877	1016	311, 312	11	716
189,998	Brush, Charles F., assignor of one-half interest to Telegraph Supply Company, Cleveland, Ohio. Electric clock	Apr. 24, 1877	1020	312	11	716
196,425	Brush, Charles F., Cleveland, Ohio. Metal-plated carbon for electrical illuminating-points	Oct. 23, 1877	773	223	12	694
	Brush, George S. (*See* Warrick & Brush.)					
	Brush, Jarvis C. [*See* Gowdy, William E., assignor.)					
194,987	Brush, William H., Buffalo, N. Y. Brick-kiln	Sept. 11, 1877	241	73	12	441
187,594	Brusie, Rebecca S., Sonora, Cal. Churn	Feb. 20, 1877	677	211	11	313
198,342	Bryan, Henry S., Aurora, Ill. Crown-sheet for fire-boxes	Dec. 18, 1877	658	200	12	1056
198,343	Same.....Spark-arrester	Dec. 18, 1877	660	201	12	1057
	Bryan, Isaac R. (*See* Bryan, James T. and I. R.)					
190,279	Bryan James, New York, N. Y. Electro-voltaic belt	May 1, 1877	166	49	11	767
196,426	Bryan, James T. and I. R., Springville, Wis. Wagon-brake	Oct. 23, 1877	774	224	12	695
191,925	Bryan, John, Birmingham, assignor to Star Pin Company, Shelton Town, Huntington, Conn. Pin-box	June 12, 1877	402	125	11	1034
198,564	Bryan, Samuel, Twin Grove, Wis. Hog-feeder	Dec. 25, 1877	886	270	12	1099
	Bryant, Charles B., *et al.* (*See* Young, Henry, jr., assignor.)					
187,595	Bryant, Edson L., assignor to Wallace & Sons, Ansonia, Conn. Lamp-burner	Feb. 20, 1877	678	211	11	313
194,327	Same.....same	Aug. 21, 1877	573	171	12	321
193,363	Bryant, Emery H., New Bedford, Mass. Railway-frog	July 24, 1877	853	261	12	151
191,650	Bryant, Robert H., Chicago, Ill., assignor to B. L. Sawyer, Chicago, Ill. Upholstering-tuft	June 5, 1877	132	41	11	994
	Bryant, Walter A. (*See* Collum, George S., assignor.)					
191,104	Bryant, William A., and G. W. D. Partridge, Good Water, Ala. Seed-planter	May 22, 1877	1029	308	11	905
	Bryson, William. (*See* Rakes, Frank, assignor.)					
	Bryson, William. (*See* Rakes, John F., assignor.)					
	Bubier, Joseph A. (*See* Hodges, Addison S., assignor.)					
	Buchanan & Lyall. (*See* De Forest, David W., assignor.)					
185,849	Buchanan, George, Binghamton, N. Y. Stove-pipe	Jan. 2, 1877	35	11	11	13
188,581	Buchanan, George, Washington, Pa. Cradle	Mar. 20, 1877	626	193	11	480
196,427	Same.....Washing-machine	Oct. 23, 1877	775	224	12	695
189,185	Buchanan, James, jr., Liverpool, England. Centrifugal drying and cleaning machine	Apr. 3, 1877	150	53	11	579
190,465	Buchanan, William, Yonkers, N. Y. Switch-signaling apparatus	May 8, 1877	369	107	11	802
195,698	Buchanan, William, and C. Smith, assignors to Eastwood, Buchanan & Smith, Bloomfield, N. J. Wire-cloth for fourdrinier paper-machines	Oct. 2, 1877	7	2	12	562
196,428	Buchanan, William, Yonkers, N. Y. Locking-switch	Oct. 23, 1877	776	224	12	695
198,449	Same.....Railway-signal and drawbridge operating device	Dec. 25, 1877	780	237	12	1083
	Buchanan, William C. (*See* Harrison & Buchanan.)					
	Buck, Benjamin F., *et al.* (*See* Pepple, Edmund, assignor.)					
	Buck, Charles H. (*See* Clement, Benjamin F., assignor.)					
189,601	Buck, Fisher A., Eastport, Me. Anchor	Apr. 17, 1877	607	188	11	654
186,537	Buck, Martin, Hillsborough, Ohio. Bolting-reel	Jan. 23, 1877	741	227	11	133
	Buck, Romanzo M., *et al.* (*See* Pepple, Edmund, assignor.)					
186,107	Buckelew, Ansel S., Jersey City, N. J. Making lift-springs for watches	Jan. 9, 1877	293	88	11	56
191,305	Buckelews, Wilbur F., Shreveport, La. Wagon-axle	May 29, 1877	1237	372	11	941
	Buckeye Sewer-Pipe Company. (*See* Johnson, Thomas, assignor.)					
	Buckeye Sewer-Pipe Company. (*See* Kent & Baldwin, assignors.)					
187,596	Buckingham, John E., assignor of one-half interest to J. L. Miller, Washington, D. C. Can-opener	Feb. 20, 1877	678	211	11	313
186,459	Buckingham, Joseph P., Chicopee, Mass. Paper box	Jan. 23, 1877	672	205	11	121
187,506	Buckingham, Joseph P., assignor of one-half interest to G. A. Denison and O. M. Hamilton, Chicopee, Mass. Paper box	Feb. 20, 1877	602	187	11	302
194,289	Same.....Paper box machine	Aug. 21, 1877	532	161	12	319

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
	Buckingham, J. P., *et al.* (*See* Denison, George A., assignor.)					
	Buckius, Albert O. (*See* Coonley & Buckius.)					
198,344	Buckley, Chauncey, Meriden, Conn. Boring wood cylinders	Dec. 18, 1877	661	201	12	1057
	Buckley, D. J. (*See* Ward, Moses N., assignor.)					
186,923	Buckminster, Prescott S., assignor of one-half interest to I. P. Rankin and G. W. Fogg, San Francisco, Cal. Rock-drilling engine	Feb. 6, 1877	4	2	11	203
198,485	Buckminster, Prescott S., Belleville, Nev. Clamp for rock-drills	Dec. 25, 1877	816	247	12	1083
198,486	Same.....Chuck for rock-drilling machines	Dec. 25, 1877	817	248	12	1083
	Buckner, Daniel L. (*See* Kellum, John L., assignor.)					
190,001	Buckner, William T., Berea, Ohio. Neck-tie retainer	Apr. 24, 1877	1033	315	11	717
192,675	Budahl, Lars, Riceford P. O., Minn. Rotary churn	July 3, 1877	130	36	12	30
	Budd, Bern L., *et al.* (*See* Allen, Ethan.).....(Reissue.)					
190,119	Budd, Bern L., Fairfield, Conn. Screw-driver	May 1, 1877	6	3	11	748
190,120	Same.....Brush	May 1, 1877	7	3	11	748
190,121	Same.....Gun-cleaning case	May 1, 1877	9	3	11	748
190,122	Same.....Composition paravaseline paste	May 1, 1877	11		11	748
190,123	Same.....Gun-cleaning brush	May 1, 1877	11	4	11	748
190,124	Same.....Field-wiper for guns	May 1, 1877	13	4	11	748
190,125	Same.....Composition emery paste	May 1, 1877	14		11	748
190,126	Same.....Composition rouge paste	May 1, 1877	15		11	748
190,189	Same.....Gun-cleaning rod	May 1, 1877	78	22	11	756
190,190	Same.....Cartridge	May 1, 1877	79	22	11	757
	Budenberg, Christian, *et al.* (*See* Prüssmann, Carl H., assignor.)					
192,358	Budke, John F., Wheeling, W. Va. Construction of barrels, casks, &c	June 26, 1877	899	269	11	1123
191,306	Budy, Friedrich, Leipsic, Saxony, Germany. Fire-extinguisher compound	May 29, 1877	1237		11	941
	Buechner, William L. (*See* Hamilton, Homer, assignor.)					
193,222	Buell, Don Carlos, Paradise, Ky. Steam dish-cleaner	July 17, 1877	687	209, 210, 211	12	121
193,803	Buell, Ezra, Henvelton, N. Y. Rotary churn	Aug. 7, 1877	8	2,3	12	236
197,327	Buell, Judson W., Union City, Mich. Water and vapor bath and couch	Nov. 20, 1877	635	187	12	868
186,985	Buermann, August, Newark, N. J. Spur	Feb. 6, 1877	74	25	11	211
191,105	Buettler, William L., and J. C. Zweidinger, Pittsburg, Pa. Shutter-worker	May 22, 1877	1030	308	11	905
	Buffalo Steam Gauge and Lantern Company. (*See* Ham, Charles S., assignor.)					
	Buffington, Edwin C., *et al.* (*See* Johnson, John W., assignor.)					
186,460	Buffington, Hubert, Jacksonville, Fla. Cartridge	Jan. 23, 1877	673	206	11	124
191,926	Buffington, Moses C., Burlington, Iowa. Vehicle-hub	June 12, 1877	402	125	11	1035
	Buford, B. D., *et al.* (*See* Heino, Phillip, assignor.)					
188,850	Bugbee, Alpheus, assignor of one-half interest to A. W. McKay, Elkhart, Ind. Clothes-pounder	Mar. 27, 1877	911	277	11	527
	Bugbee, George W. (*See* Doane & Bugbee.)					
198,077	Bugbee, George W., assignor to J. A. Fay & Co., Cincinnati, Ohio. Saw-set	Dec. 11, 1877	368	114, 115	12	1009
189,602	Bugh, Samantha J., Saint Joseph, Mo. Sad-iron	Apr. 17, 1877	608	188	11	654
194,329	Buhrer, Stephen, Cleveland, Ohio. Stench-trap for use in sinks, &c	Aug. 21, 1877	575	172	12	324
197,993	Same.....Stench-trap	Dec. 11, 1877	294	90	12	997
186,410	Buist, David, and C. E. Alden, Philadelphia, Pa. Broadcast sower	Jan. 23, 1877	623	190	11	117
186,305	Bujac, Alfred, Washington, D. C. Device for preventing pipes from bursting	Jan. 16, 1877	483	148	11	88
187,351	Bull, Daniel, assignor to self and W. L. Beals, Amboy, Ill. Windmill	Feb. 13, 1877	432	136	11	273
188,000	Same.....Mechanism for obtaining reciprocating motion from wind-wheels	Mar. 6, 1877	43	12	11	386
197,824	Bull, George, and L. Koch, New Orleans, La. Bale-tie	Dec. 4, 1877	118	37	12	963
195,881	Bull, Henry C., assignor of one-half interest to W. L. Headley, Brooklyn, N. Y. Locomotive-street-car	Oct. 9, 1877	196	56	12	597
195,882	Bull, Henry C., assignor of one-third interest to W. L. Headley, Brooklyn, N. Y. Machine for boring gun-barrels	Oct. 9, 1877	198	56	12	597
	Bull, Josiah Q. (*See* Glover, Robert, assignor.)					
192,053	Bullard, Ezekiel W., Barre, Mass. Fence-post	June 19, 1877	560	171	11	1067
	Bullard, Frank F. (*See* Marcy, Merrick D., assignor.)					
194,859	Bullard, Isaac, Reedville, assignor to self and A. Hale & Co., Boston, Mass. Nursing-bottle	Sept. 4, 1877	103	33	12	415
	Bullard, James H. (*See* Wesson & Bullard.)					
192,676	Bullard, James H., Springfield, Mass. Metallic cartridge	July 3, 1877	131	36	12	30
197,823	Same.....Metallic-cartridge shell	Dec. 4, 1877	116	36	12	962
187,359	Bullock, Ephraim K., assignor of two-thirds interest to W. J. Miller and J. M. Curtiss, Detroit, Mich. Hoop-skirt	Feb. 13, 1877	431	136	11	273
	Bullock, Horace W., *et al.* (*See* Dart, Lewis, assignor.)					
	Bullock, Orvis W., *et al.* (*See* Dart, Lewis, assignor.)					
	Bullock Printing-Press Company. (*See* Bingham, Samuel H., assignor.)					
187,597	Bullough, John, Accrington, England. Machine for sizing and beaming yarn	Feb. 20, 1877	679	212	11	313
190,127	Same.....Electric stop-motion for drawing-frames, &c	May 1, 1877	15	4	11	748
192,971	Bundy, Jonathan, Centredale, Iowa. Gate	July 10, 1877	431	129	12	80
187,703	Bunker, Augustus S., Lawrence, assignor of one-half interest to W. Sanborn, Chelsea, Mass. Wrench	Feb. 27, 1877	806	250	11	338
190,191	Bunnell, Jesse H., and M. W. Goodyear, New York, N. Y. Telegraph-sounder	May 1, 1877	80	22	11	757
	Bunster, Henry B. (*See* Fell & Bunster.)					
188,498	Bunton, William, Pittsburg, assignor to self and H. McDonald, Allegheny, Pa. Machine for rolling metal	Mar. 20, 1877	550	169	11	469
194,071	Burbank, Abner, assignor of two-thirds interest to D. Hovey and E. A. Chase, Rochester, N. Y. Lamp	Aug. 14, 1877	590	86, 87	12	231
187,507	Burbank, Daniel, Woburn, Mass. Steam-boiler	Feb. 20, 1877	603	187	11	302
195,111	Burbee, Anson, Claremont, N. H. Car-coupling	Oct. 16, 1877	453	132	12	640
	Burch, Herbert A. (*See* Dewey, Henry E., assignor.)					
187,961	Burch, John O., Cleveland, Ohio. Spring bed-bottom	Mar. 6, 1877	5	2	11	781
194,575	Burden, William H., and B. J. Pleasance, Cleveland, Ohio. Hose-coupling	Aug. 28, 1877	822	245	12	367
	Burdick, Albert S. (*See* Hermance, Charles W.)					
194,547	Burdick, Alfred, Baldwin, Iowa. Well boring and drilling machine	Aug. 28, 1877	798	238	12	464
	Burdick, A. R. (*See* Bailey & Burdick).....(Reissue.)					
192,972	Burdin, Luther E., Paris, Ky. Lap-link	July 10, 1877	432	130	12	80
	Burdon, William. (*See* Baldwin & Burdon.)					
7,858	Burgo, John, Circleville, Ohio, assignor to Yale Lock Manufacturing Company, Stamford, Conn. Time-lock.....(Reissue)	Aug. 21, 1877	761	226	12	349
191,506	Burgo, John, Circleville, Ohio, assignor, by mesne assignments, to Yale Lock Manufacturing Company, Stamford, Conn. Time-lock	Aug. 21, 1877	748	223	12	348
192,359	Burger, Charles G., and A. D. Shoup, Newton, Iowa. Machine for harness-makers' use.	June 26, 1877	900	270	11	1123

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Burger, Frederick. (*See* Bischoff, Anton, assignor.)					
195,699	Burger, William, Pittsburg, Pa. Clamp-piece for insertible saw-teeth	Oct. 2, 1877	8	3	12	562
	Burgert, George. (*See* Martin, John W., assignor.)					
	Burgess, Hugh. (*See* Keen & Burgess)	(Reissue.)				
192,360	Burgess, Josiah, Zanesville, Ohio. Soldering and heating furnace	June 26, 1877	901	270	11	1124
197,541	Burgess, Phineas, Brooklyn, N. Y. Universal joint	Nov. 27, 1877	868	258	12	911
189,694	Burgess, Richard O., Providence, assignor of one-half interest to W. Blanchard, Woonsocket, R. I. Harness-pad	Apr. 17, 1877	697	215	11	666
198,236	Burghardt, John H., Stockbridge, Mass., assignor of two-thirds interest to C. H. Longley, Hartford, Conn. Grinding wood for paper-pulp	Dec. 18, 1877	555	171	12	1041
187,598	Bürgin, Emil, New York, N. Y. Skating-rink	Feb. 20, 1877	682	212	11	313
191,927	Bürgin, Emil, New York, N. Y. Air-pump	June 12, 1877	403	126	11	1035
193,479	Bürgin, Emil, Basil, Switzerland. Grappling instrument for handling cans in making ice	July 24, 1877	958	291	12	167
186,986	Burgun, Joseph, assignor to Dilhridge & Co., Pittsburg, Pa. Manufacture of hollow glassware	Feb. 6, 1877	74	25	11	211
197,598	Burhans, William W., Durham, N. Y. Car-coupling	Nov. 27, 1877	924	275	12	919
196,783	Burk, Frank N., New York, N. Y. Scrubbing-pail	Nov. 6, 1877	46	14	12	767
195,256	Burk, Hiram, Zoar Station, Ohio. Device for regulating the feed of mining-drills	Sept. 18, 1877	534	156	12	491
196,287	Burk, Josiah K., Lorraine, Mo. Band-cutting feeder for thrashing-machines	Oct. 23, 1877	642	186	12	675
192,973	Burk, Roswell W., Battle Creek, assignor to self and E. Darlington, Penfield, Mich. Quilting-frame	July 10, 1877	433	130	12	89
189,079	Burk, Thomas H., New York, N. Y. Level	Apr. 3, 1877	61	23	11	567
	Burke, Chauncey E. (*See* Gusman, Lewis B., assignor.)					
194,644	Burke, Christopher C., Cuthbert, Ga. Sad-iron and fluting-iron combined	Aug. 28, 1877	879	262	12	376
198,565	Burke, Edward K., New York, N. Y. Box for books	Dec. 25, 1877	887	270	12	1099
190,547	Burke, Solomon G., assignor of one-half interest to B. L. Dyer, La Fayette, Ala. Portable fence	May 8, 1877	449	133	11	813
186,228	Burley, Ira, Red Wing, Minn. Grubbing-machine	Jan. 16, 1877	416	128	11	79
	Burn, Charles. (*See* Heshuysen & Burn.)					
192,225	Burnell, Arthur S., Marshalltown, Iowa. Barbed-wire fence	June 19, 1877	731	223	11	1090
194,646	Burnett, George E., Harrisburg, Ill. Tax-reckoner	Aug. 28, 1877	881	263	12	376
190,665	Burnett, James H., Newark, N. J., assignor to Chard, Howe & Weber, New York, N. Y. Lubricator for journals	May 15, 1877	594	176	11	839
	Burnett, John W. (*See* Payne, Charles I., assignor.)					
197,994	Burnett, Marshall, Hyde Park, Mass. Stop-cock	Dec. 11, 1877	295	90	12	997
	Burnham, George, *et al.* (*See* Longstreth, Edward, assignor.)					
195,089	Burnham, John, Milan, Mich. Bee-hive	Sept. 11, 1877	349	105	12	456
195,568	Burnham, Nathaniel, Amboy, Ill. Fence-wire stretcher	Sept. 25, 1877	838	249	12	543
188,582	Burnham, Noah, Menomonee, Wis. Harrow	Mar. 20, 1877	626	193 194	11	480
	Burnham, Parry, Williams & Co. (*See* Longstreth, Edward, assignor.)					
	Same (*See* Parry, Charles T., assignor.)					
	Burns, Arthur. (*See* Fleming & Burns.)					
196,628	Burns, Charles S., Cincinnati, Ohio. Feed-cooker	Oct. 30, 1877	994	290	12	736
7,505	Burns, Frank, Waltham, Mass. Knitting-machine needle	(Reissue.) Feb. 13, 1877	539	165	11	286
	Burns, George F., *et al.* (*See* Burns, William H., assignor.)					
	Burns, Robert A. (*See* Snead & Burns.)					
192,897	Burns, William H., assignor to J. H. Prouty and S. S. Sprague, Worcester, and G. F. Burns, Millbury, Mass. Loom-temple	July 10, 1877	363	107	12	69
187,449	Burr, Bradley, Batavia, Ill. Bent-wood corner	Feb. 20, 1877	547	169	11	295
187,450	Same. Dash-board	Feb. 20, 1877	548	169	11	295
187,451	Same. Metal seat-riser	Feb. 20, 1877	549	169	11	295
187,452	Same. Wagon-body iron	Feb. 20, 1877	550	170	11	295
187,453	Same. Metal corner for wagon-bodies	Feb. 20, 1877	551	170	11	295
198,273	Burr, Charles R., and J. V. R. Towers, Washington, D. C. Cuspadore for cars and other vehicles	Dec. 18, 1877	603	182	12	1048
188,851	Burr, David A., Philadelphia, Pa. Railway-switch	Mar. 27, 1877	912	277	11	527
193,804	Burr, John I., assignor to Barrows Savery Company, limited, Philadelphia, Pa. Preserving-kettle	Aug. 7, 1877	9	3	12	236
186,538	Burr, John T., Memphis, Tenn. Cotton-press	Jan. 23, 1877	742	227	11	133
185,818	Burr, Laura E. M., Lansing, Mich. Sketching-album	Jan. 2, 1877	6	2	11	9
	Burr, Richard. (*See* Welham, Thomas.)					
7,892	Burr, Sanford S., Dedham, Mass. Wardrobe-bedstead	(Reissue.) Sept. 18, 1877	710	210	12	516
191,651	Same. same	June 5, 1877	132	41	11	994
	Burr, William H. (*See* English & Burr.)					
	Burrell, David H. (*See* McEachern & Burrell.)					
	Burrell, Ives & Co. (*See* Fairchild, Curtiss T., assignor.)					
198,566	Burridge, Thomas H., and L. P. Barnes, Saint Louis, Mo. Car-roof	Dec. 25, 1877	888	270	12	1099
190,192	Burrington, Henry A., Providence, R. I. Inkstand	May 1, 1877	81	22	11	757
197,092	Burris, John W., assignor of one-half interest to J. J. Hannenstine, Marshall, Tex. Seed-planter	Nov. 13, 1877	382	112	12	823
192,809	Burritt, Elihu, Elgin, Ill. Dentist's chair	July 3, 1877	256	75	12	46
	Burroughs, Charles. (*See* Sanborn & Burroughs)	(Reissue.)				
195,975	Burroughs, George H., Princeton, N. J. Feed-water heater and feeder	Oct. 9, 1877	298	83	12	611
195,257	Burroughs, Isham B., Tuscaloosa, Ala. Bee-hive	Sept. 18, 1877	536	156	12	491
190,416	Burrows, Robert, Chicago, Ill. Refrigerator-car	May 8, 1877	319	94	11	796
196,967	Same. same	Nov. 13, 1877	217	74	12	803
	Burrows, Robert D. (*See* Dawson, William A., assignor.)					
188,853	Burrows, William T., Nashua, Iowa. Windmill	Mar. 27, 1877	914	278	11	527
192,736	Burrows, William T., assignor to Hopkins & Burrows, Nashua, Iowa. Fence-barb	July 3, 1877	176	51	12	37
194,617	Same. Barb for fence-wires	Aug. 28, 1877	883	263	12	376
190,415	Burst, John L., jr., and C. M. D'Autrey, Jacksonville, Fla. Preserving fruit	May 8, 1877	318	93	11	796
190,954	Burstenbinder, Otto, Humboldt, Mich. Explosive compound	May 22, 1877	885		11	885
	Burt, Charles S., *et al.* (*See* Dexter, Parker, assignor)	(Reissue.)				
190,414	Burt, Francis J., and J. S. Whitney, Rochester, Minn. Millstone-driver	May 8, 1877	318	93	11	796
	Burt, Frank B. (*See* Ryckman, William J., assignor.)					
185,031	Burt, George E., Harvard, Mass. Horse hay-rake	Jan. 9, 1877	221	67	11	46
183,196	Same. Saw-table	Jan. 16, 1877	301	119	11	76
188,852	Burt, John, Detroit, Mich. Apparatus for purifying furnace-gases	Mar. 27, 1877	913	277	11	527
198,332	Burt, Leonard H., New Haven, Conn. Metallic fence	Oct. 23, 1877	691	199	12	682
194,938	Burt, Richard W., Peoria, Ill. Horizontal wind-wheel	Sept. 11, 1877	242	74	12	441
	Burt, Silas *et al.* (*See* Dexter, Parker, assignor)	(Reissue.)				
191,307	Burt, Wellington R., East Saginaw, Mich. Expanding rock-drill	May 29, 1877	1238	372	11	941

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g	Vol.	Page.
188,041	Burtis, William, assignor of two-thirds interest to G. W. Bogert and F. W. Melvil, New York, N. Y. Seal-bolt for car-doors	Mar. 6, 1877	87	25	11	392
198,567	Burtnett, William B., and G. W. Cook, New York, N. Y.; said Cook assignor to said Burtnett. Brush	Dec. 25, 1877	889	271	12	1099
	Burton, George B., *et al.* (*See* Boda, Abia Z., assignor.)					
	Burton, John B. (*See* Burton, William T. and J. B.)					
	Burton, John W. (*See* McDonald & Burton.)					
188,100	Burton, Susannah P., San Francisco, Cal. Awning for bird-cages	Mar. 6, 1877	132	39	11	398
190,466	Burton, Wiley C., Des Moines, Iowa. Churn	May 8, 1877	371	108	11	803
197,014	Burton, William T. and J. B., Boston, Mass. Device for hitching horses	Nov. 13, 1877	294	87	12	810
	Buscall, Charles F. (*See* Walgrain & Buscall.)					
	Buscall, Kate. (*See* Walgrain & Buscall.)					
198,078	Buschmann, Gustav, and J. H. Brown, Chicago, Ill. Backlash-spring for mill-spindles	Dec. 11, 1877	369	115	12	1009
188,337	Busell, James H., Boston, Mass. Heel and sole trimming-machine	Mar. 13, 1877	378	118 119	11	437
196,288	Busell, James H., Boston, Mass. Edge-setting and burnishing tool for boots and shoes	Oct. 23, 1877	642	186	12	676
190,280	Busenger, Anthony, Mill Brook Depot, Va. Cultivator	May 1, 1877	167	49	11	767
197,093	Buser, William E., Chillicothe, Ohio. Sofa-bedstead	Nov. 13, 1877	383	112	12	823
198,345	Bush, Brooks, Fulton County, Georgia. Sash-fastener	Dec. 18, 1877	662	201	12	1057
196,873	Bush, Charles E., Tecumseh, assignor of one-half interest to A. Royer, Cherokee County, Alabama. Vehicle-wheel	Nov. 6, 1877	145	43	12	780
193,919	Bush, Charles H., Fall River, Mass. Child's carriage	Aug. 7, 1877	117	37	12	251
191,308	Bush, Henry F. and M. L., Douglassville, Pa. Grindstone-sharpening attachment	May 29, 1877	1238	372	11	942
	Bush, Henry J., *et al.* (*See* Smith, Charles S., assignor.)					
	Bush, Martin L. (*See* Bush, Henry F. and M. L.)					
188,583	Bush, Rufus T., New York, N. Y. Metallic can	Mar. 20, 1877	627	194	11	481
	Bush, William C. (*See* Blair & Bush.)					
196,289	Bushee, William, Gloucester, Mass. Truck for moving buildings	Oct. 23, 1877	644	187	12	676
192,562	Bushnell, Charles R., Minneapolis, Minn. Band-pulley	July 3, 1877	7	3	12	13
	Bushnell, David. (*See* Bushnell, William K. and D.)					
194,217	Bushnell, Henry, New Haven, Conn. Reservoir for compressed air	Aug. 14, 1877	445	135	12	301
190,737	Bushnell, William K., Burlington, Wis. Sulky-attachment for plows	May 15, 1877	664	197	11	848
195,977	Bushnell, William K. and D., Burlington, Wis. Sulky-attachment for plows	Oct. 9, 1877	300	84	12	611
190,417	Bushong, Israel, New Holland, Pa. Rocking cradle	May 8, 1877	321	94	11	796
196,740	Bushway, Franklin C., Lincoln, assignor of one-half interest to J. Hukill, Tazewell County, Illinois. Grave-tablet	Nov. 6, 1877	3	1	12	761
186,076	Buss, Ezra, Springfield, Ohio. Carpet-beater	Jan. 9, 1877	264	80	11	52
	Bussell, Erastus T., Indianapolis, Ind. India-rubber and steel springs (Extension)	Oct. 6, 1877				
186,461	Bustin, William H., Boston, Mass. Harness-saddle-tree	Jan. 23, 1877	673	206	11	124
188,776	Butger, David, Milwaukee, Wis. Grain-separator	Mar. 27, 1877	835	254	11	516
	Butler, Ambrose E. H. B. (*See* Butler, John O. and E. H. B.)					
189,920	Butler, Charles W., New York, N. Y. Stop-hinge for carriage-doors, &c.	Apr. 24, 1877	947	289	11	706
	Butler, C. P. L., *et al.* (*See* Meeker, De Witt C., assignor.)					
196,648	Butler, Edgar, Espy, Pa. Fish-hook	Oct. 30, 1877	1019	296	12	740
194,510	Butler, Francis G., assignor to Vermont Farm-Machinery Company, Bellows Falls, Vt. Milk-setting apparatus	Aug. 28, 1877	765	227	12	359
	Butler, Henry. (*See* Ross, Hugh, sr., assignor.)					
	Butler, Henry L., jr. (*See* Kellogg, Henry, assignor) (Reissue.)					
190,818	Butler, Jeremiah C., Greenton, assignor of one-half interest to J. E. Shotwell, Lexington, Mo. Motor	May 15, 1877	734	217	11	858
190,817	Butler, John L., Osceola, Iowa. Cradle	May 15, 1877	733	217	11	858
192,413	Same.....Baby-walker	June 26, 1877	952	285	11	1130
197,094	Butler, John O. and A. E. H. B., Kirkstall Forge, Leeds, England. Machine for rolling tubes and bars	Nov. 13, 1877	384	113	12	823
	Butler, Thomas L. (*See* Butler & Wellge, assignors.)					
	Butler, Thomas L. (*See* Clune, John F., assignor.)					
195,442	Butler, Thomas T., Loda, Ill. Corn-planter	Sept. 25, 1877	719	212	12	526
188,584	Butler, William A., New York, N. Y. Fountain-lamp	Mar. 20, 1877	628	194	11	481
189,186	Same.....Lamp	Apr. 3, 1877	153	53	11	470
189,425	Same.....Safety-pin shield	Apr. 10, 1877	419	132	11	621
190,281	Same.....Safety-pin	May 1, 1877	168	49	11	768
195,791	Butler, William A., and W. Wellge, assignors to T. L. Butler, New York, N. Y. Machinery for sharpening safety-pins	Oct. 2, 1877	95	28	12	575
195,978	Same.....Machinery for making safety-pins	Oct. 9, 1877	302	84	12	611
188,775	Butler, William H., Brooklyn, N. Y. Fire-proof safe	Mar. 27, 1877	833	253	11	516
198,726	Butler, William H., Brooklyn, assignor of one-half interest to W. C. Hurd, New York, N. Y. Coupling for pipes and tubes	Dec. 25, 1877	1050	319	12	1122
198,487	Butman, Thomas R., Milan, Ohio. Furnace-grate	Dec. 25, 1877	817	248	12	1083
	Butterfield, Charles F., *et al.* (*See* Sperry, Henry C., assignor.)					
	Butterfield, Don C. (*See* Cheney & Butterfield.)					
7,921	Butterfield, George, assignor to D. Robinson, jr., Boston, Mass. Shoe-lacing fastening (Reissue)	Oct. 23, 1877	878	253	12	707
190,738	Butterfield, George, Boston, assignor to J. T. Phelps, Chelsea, Mass. Suspender-stays	May 15, 1877	665	197	11	848
195,979	Butterfield, John S., Mendon, Mo. Cultivator	Oct. 9, 1877	304	85	12	611
196,559	Butterfield, Thomas F., De Witt, Iowa. Steam-generator	Oct. 30, 1877	932	270	12	727
	Butterfield, William C., *et al.* (*See* Sperry, Henry C., assignor.)					
194,125	Butterfuss, Jacob, Salamanca, N. Y. Hame-clip	Aug. 14, 1877	364	108	12	289
190,548	Butterworth, Charles C., assignor to self and J. Butterworth, Philadelphia, Pa. Drying-cylinder	May 8, 1877	450	133	11	813
	Butterworth, James. (*See* Butterworth, Charles C., assignor.)					
195,569	Butterworth, William, assignor to Corning Glass-Works, Corning, N. Y. Glass-ball target	Sept. 25, 1877	838	249	12	543
193,317	Buttlear, William, assignor to Dithridge & Co., Pittsburg, Pa. Machine for flaring glassware	July 24, 1877	809	248	12	145
192,148	Buttler, George, New Brunswick, N. J. Mortising-chisel	June 19, 1877	651	200	11	1079
191,024	Butt.es, Henderson W., New York, N. Y. Preparing and preserving clams	May 22, 1877	956		11	894
	Butz, Michael. (*See* Fritz, Gottlob, assignor.)					
	Buxbaum, Leopold, *et al.* (*See* Farnham, Asa M., assignor.)					
191,928	Buxton, John E., Owatonna, Minn. Grain-binder	June 12, 1877	404	123	11	1035
191,929	Same.....same	June 12, 1877	404	126	11	1035
188,854	Buxton, Levi W., and J. P. Greeley, Nashua, N. H. Heel-plate for boots and shoes	Mar. 27, 1877	914	278	11	528
189,695	Burby, Albert G., assignor to E. and H. T. Anthony and V. M. Wilcox, New York, N. Y. Gas-key	Apr. 17, 1877	697	215	11	666

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
191,106	Buzby, Albert G., Philadelphia, Pa. Coffee-making apparatus	May 22, 1877	1031	308	11	905
	Buzzell, Frank O. (*See* Hanson & Buzzell.)					
189,336	Buzzell, Jared, Boston, Mass. Boot-jack	Apr. 10, 1877	336	107	11	610
192,485	Same.....Booting-jack	June 26, 1877	1013	307	11	1139
191,400	Buzzell, John G., Lynn, Mass. Machine for whitening and shaving leather	May 29, 1877	1313	398	11	952
195,883	Buzzell, John P., assignor to Bigelow Carpet Company, Clinton, Mass. Letting-off mechanism	Oct. 9, 1877	199	57	12	598
192,974	Byam, Eber C., Rochester, N. Y. Curtain-cord tightener	July 10, 1877	433	150	12	80
7,559	Byerley, Francis X., Cleveland, Ohio. Purifying paraffine-wax (Reissue)	Mar. 20, 1877	762		11	498
193,318	Byers, John, assignor of one-half interest to I. Culver, Ravenna, Ohio. Packing for piston-rods	July 24, 1877	810	249	12	146
198,568	Byram, Silas D., Liberty, Ind. Refrigerating butter-carrier	Dec. 25, 1877	889	271	12	1099
	Byrant, Charles B. (*See* King, Theophilus, jr., assignor.)					
196,560	Byrd, Christmas P., North Cambridge, Mass. Car-coupling	Oct. 30, 1877	933	270	12	727
190,819	Byrne, Frederick W., Liverpool, England. Machine for marking ground	May 15, 1877	735	217	11	858
	Byrne, George P., *et al.* (*See* Browne, James W., assignor.)					
	Byrne, George P. (*See* Griffith & Byrne.)					
	Byrne, George P. (*See* Griffith, Byrne & Shedlock.)					
189,426	Byrne, Peter, jr., Norwalk, Wis. Scrubbing-machine	Apr. 10, 1877	420	132	11	621
197,328	Byron, Edward L., Quebec, Canada. Hand-truck	Nov. 20, 1877	636	187	12	868
198,569	Byron, Francis, Grand Rapids, Wis. Apparatus for covering the surface of roads with ice	Dec. 25, 1877	890	271	12	1099
194,126	Cabell, Samuel G., Washington, D. C. Nautical alarm-buoy	Aug. 14, 1877	364	108	12	289
	Cable, Austin D., *et al.* (*See* Sherwood, Obadiah, jr., assignor.)					
187,508	Cabot, Samuel, jr., Boston, Mass. Artificial fuel	Feb. 20, 1877	604		11	302
193,920	Same.....Obtaining ammonia salts	Aug. 7, 1877	118		12	251
	Cadugan, Thomas. (*See* Roberts & Cadugan.)					
197,454	Cadwell, Jonathan W., Providence, R. I. Shirt-ironing board	Nov. 27, 1877	775	231	12	898
192,149	Cady, Almon B., assignor of one-half interest to W. S. Walker, Kenton, Ohio. Compound for the manufacture of porcelain adapted for dental plates, teeth, &c	June 19, 1877	655		11	1079
	Cady, Artimas S. (*See* Bacon, James D., assignor.)					
	Cady, Charles T. (*See* Tweedle, William B., assignor.)					
193,480	Cady, Ephraim, C. and J. W. Wolfe, Johnstown, Ohio. Washing-machine	July 24, 1877	959	292	12	167
	Cady, H. Emilio. (*See* Cooper, George, assignor.)					
187,808	Cady, Ransom E., Boston, Mass., assignors to Globe Nail Company. Machine for making horseshoe-nails	Feb. 27, 1877	911	282 283	11	351
186,077	Cady, William, Philadelphia, Pa. Broom-making machine	Jan. 9, 1877	265	80	11	52
	Caffrey, Charles S. (*See* Donley, William J., assignor.)					
	Cagle, James H. (*See* Clements & Cagle.)					
190,955	Cahill, Henry Y., assignor of one-half interest to W. A. Weinreich, Dayton, Ohio. Ventilator for grain	May 22, 1877	885	262	11	885
188,233	Cahoone, Edwin R., Newark, N. J. Harness-pad	Mar. 13, 1877	281	88	11	424
191,829	Cahoone, Edwin R., and N. Teas, Newark, N. J. Harness-saddle	June 12, 1877	317	98	11	1023
193,749	Cahoone, Edwin R., Newark, N. J. Harness-saddle	July 31, 1877	1244	374	12	216
191,830	Cain, James, Pittsburg, Pa. Lamp-burner	June 12, 1877	317	98	11	1023
191,025	Cain, James H., Cana, N. C. Mower	May 22, 1877	957	284	11	894
192,054	Cain, John, assignor of one-half interest to W. S. Eberman & Sons, Sandy Lake, Pa. Roll for the manufacture of sucker-rod points	June 19, 1877	561	171	11	1068
	Cain, Sarah A. (*See* Nelson, David A., assignor.)					
	Cain, W. F. (*See* West, Philip L., assignor.)					
	Cairns, John. (*See* Johnston, Cairns & Johnston.)					
198,346	Cairns, William, Jersey City, N. J. Centrifugal machine	Dec. 18, 1877	663	202	12	1059
197,455	Calder, Alexander, London, Canada. Car-axle box and spring	Nov. 27, 1877	776	232	12	898
189,840	Calderwood, Hugh W., Wilkinburg, Pa. Wagon-top	Apr. 24, 1877	869	265	11	696
	Caldwell, John A. (*See* Adlam, Samuel, jr., assignor.)					
191,026	Caldwell, John A., Boston, Mass. Tool for tightening and fastening straps for securing hose to couplings	May 22, 1877	958	284	11	894
197,716	Same.....Strap for securing hose to couplings	Dec. 4, 1877	7	3	12	947
197,717	Same.....Implement for fastening hose-straps	Dec. 4, 1877	8	3	12	947
190,193	Caldwell, John F., and A. F. Pleitz, Brownsville, Tenn. Coffee-roaster	May 1, 1877	81	23	11	757
192,226	Caldwell, John K., Philadelphia, Pa. Machine for making and pressing bricks	June 19, 1877	732	224	11	1090
198,347	Same.....Oven or tunnel for drying bricks, &c	Dec. 18, 1877	663	202	12	1057
194,891	Caldwell, John R., and J. W. Herren, Dadeville, Ala. Plow	Sept. 4, 1877	131	41	12	419
193,688	Caldwell, Marvin A., North East, Pa. Wringer	July 31, 1877	1195	358	12	208
191,309	Caldwell, Samuel, Greenfield, Ohio. Nut-lock	May 29, 1877	1239	372	11	942
	Calef, Benjamin S. (*See* Merrill, Chester R., assignor.)					
189,019	Caler, John H., and D. Powell, Fallston, Pa. Rope-clamp	Apr. 3, 1877	9	3	11	500
197,762	Calhoun, Madison, Ocate, N. Mex. Nut-lock	Dec. 4, 1877	59	19	12	954
189,080	Calhoun, Robert, Allegheny, assignor of one-half interest to P. C. Dean, Pittsburg, Pa. Window-screen	Apr. 3, 1877	62	23	11	567
186,795	Calkins, John W., Avoca, N. Y. Machine for sawing laths	Jan. 30, 1877	993	309	11	176 147
192,227	Call, Sarah C., Boston, Mass. Grate-extension for stoves	June 19, 1877	736	224	11	1090
196,191	Callahan, Andrew V., Philadelphia, Pa. Cooking-stove	Oct. 16, 1877	532	154	12	652
197,245	Callahan, Cornelius, assignor of two-thirds interest to E. E. Sibley, Chelsea, Mass. Repairing rubber lined hose	Nov. 20, 1877	252	163	12	856
191,566	Callan, Michael, Innerskip, Canada. Lime-kiln	June 5, 1877	54	16	11	984
195,792	Callaway, James F., Louisville, Ky. Car-heating apparatus	Oct. 2, 1877	97	28	12	575
185,892	Callaway, William, Elwood, Ind. Whip-socket	Jan. 2, 1877	79	21	11	18
188,585	Same.....Rein-holder	Mar. 20, 1877	630	194	11	481
197,015	Calm, Emil C., New York, N. Y. Dress-elevator	Nov. 13, 1877	295	87	12	810
	Calman, Michael J. (*See* Raymond, Frank, assignor.)					
	Calvert, Frank. (*See* Harlan & Calvert.)					
194,576	Calvert, James H., Princeton, Ky. Washing-machine	Aug. 28, 1877	823	245	12	570
195,700	Cameron, Alexander, Chicago, Ill., assignor, by mesne assignments, to G. H. and J. M. Worthington, Amherst, Ohio. Sickle-grinder	Oct. 2, 1877	9	3	12	562
	Cameron, Elizabeth W. M. (*See* Cameron, John F., assignor.)					
190,195	Cameron, James W., Providence, R. I. Wire draw-plate	May 1, 1877	83	23	11	757
193,750	Cameron, John D., Chippewa Falls, Wis. Gate-latch	July 31, 1877	1247	374	12	217
186,078	Cameron, John F., South Brooklyn, assignor to E. W. M. Cameron, Brooklyn, N. Y. Ventilating buildings	Jan. 9, 1877	267		11	52
195,339	Cameron, Thomas, and J. F. Jowers, Mount Pleasant, Miss. Gate-latch	Sept. 18, 1877	609	179	12	502
192,228	Cameron, Tilmon A. H., Petra, Mo. Portable fence	June 19, 1877	737	225	11	1091
192,229	Same.....same	June 19, 1877	738	225	11	1091

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Month'y volume. Spec.	Month'y volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
193,689	Cammack, Rice P., and C. A. Ray, Louisa Court-House, Va. Pump	July 31, 1877	1196	378	12	209
189,337	Camp, Benjamin F., Philadelphia, Pa. Stone pavement	Apr. 10, 1877	336	107	11	610
194,890	Camp, Bushrod H., Charlestown, Mass., and W. H. Camp, Waterbury, Conn. Post-office box	Sept. 4, 1877	120	40, 41	12	418
197,718	Camp, Horace B., Cuyahoga Falls, Ohio. Tile-machine	Dec. 4, 1877	9	3	12	948
192,677	Camp, Isaac N., Deerfield, Mich. Vehicle axle-box	July 3, 1877	132	36	12	30
	Camp, Mortimer M., *et al.* (*See* Goodell, Abner C., assignor.)					
193,274	Camp, Sampson N., Forksville, La. Cotton-chopper	Dec. 18, 1877	603		12	1048
	Camp, Wallace, H. (*See* Camp, Bushrod H. and W. H.)					
190,739	Campbell, Alexander H., Liberty, Ind. Railway-tie	May 15, 1877	666	197	11	848
187,809	Campbell, Andrew, Nebraska City, Nebr. Harvester	Feb. 27, 1877	913	283	11	351
194,218	Campbell, Andrew, Brooklyn, N. Y. Ink-fountain for printing-presses	Aug. 14, 1877	446	136	12	301
	Campbell Brothers. (*See* Campbell, Timothy L., assignor.)					
	Campbell, Charles J. (*See* Davison, Peter, assignor.)					
7,703	Campbell, Duncan M., Flint, Mich. Car-coupling (Reissue)	May 29, 1877	1444	434	11	906
196,784	Campbell, Frank M., Saint Louis, Mo. Sky-light	Nov. 6, 1877	47	14	12	767
187,214	Campbell, Frank W., Chicago, Ill. Napkin-holder	Feb. 13, 1877	298	97	11	255
195,701	Campbell, George, assignor of one-third interest to W. A. Phipps, Toronto, Canada. Stone cutting and dressing machine	Oct. 2, 1877	10	3	12	562
197,095	Campbell, George, Pittsfield, Mass. Clothes-wringer	Nov. 13, 1877	385	113, 114	12	823
191,000	Campbell, Harry C., Allegheny, Pa. Oil-can spout	May 22, 1877	931	275	11	891
	Campbell, Jacob F. (*See* Fisher, Oliver P., assignor.)					
190,128	Campbell, James, Chicago, Ill. Preserving meat in transit	May 1, 1877	17		11	748
195,570	Campbell, James, Harrison, Ohio, Corn-planter	Sept. 25, 1877	839	249, 250	12	543
190,194	Campbell, John T., Rockville, Ind. Lifting-tongs	May 1, 1877	82	23	11	757
	Campbell, Joseph. (*See* Raymond, Seymour, assignor.)					
191,107	Campbell, Mark, Chicago, Ill. Napkin-holder	May 22, 1877	1032	308	11	905
188,280	Campbell, Nathan, Rochester, N. Y. Curtain-fixture	Mar. 13, 1877	321	101	11	429
190,956	Campbell, Neil, Brooklyn, N. Y. Street-sweeper	May 22, 1877	886	262	11	886
197,825	Campbell, Timothy L., assignor to Campbell Brothers, East Koy, N. Y. Hand-rake	Dec. 4, 1877	118	37	12	963
188,855	Campbell, Uriah B., Boston, Mass. Can-jacket	Mar. 27, 1877	915	278	11	528
193,921	Campbell, William, Jersey City, N. J. Etching glass	Aug. 7, 1877	119		12	251
188,101	Campbell, William W., Frankfort, Ind. Spring-link	Mar. 6, 1877	133	49	11	398
191,108	Campfield, James H., Ottawa, Ill. Cigar	May 22, 1877	1033	309	11	905
188,586	Canaday, Hugh H., Fairfield, Iowa. Gang-plow	Mar. 20, 1877	631	195	11	481
194,072	Same.....Sulky-plow	Aug. 14, 1877	291	87	12	281
190,740	Cancio, José R. Pol, Lugo, Spain. Horseshoe	May 15, 1877	667	198	11	848
	Candee & Co., L. (*See* Watkinson, George, assignor.)					
187,352	Candee, Charles E., assignor to self and J. W. Conlogue, Saint Louis, Mo. Car-axle box	Feb. 13, 1877	432	136	11	273
	Candee, Henry O. (*See* Ely, George E. and S. D., assignors.)					
196,429	Candlish, Thomas C., Saint Joseph, Mo. Corset-clasp	Oct. 23, 1877	777	224	12	695
192,975	Canedy, William E., and F. Larson, Rochester, Minn. Portable forge	July 10, 1877	435	130	12	80
7,513	Canfield, Andrew, Davenport, Iowa. Corn-cultivator (Reissue)	Feb. 20, 1877	772	241	11	325
194,330	Canfield, Lockwood, Fond du Lac, Wis. Fastener and tightener for cylindrical spiral wire-coils in bed-bottoms, &c	Aug. 21, 1877	575	172	12	325
187,509	Canfield, Lorenzo B., Syracuse, N. Y. Grasshopper-destroyer	Feb. 20, 1877	605	187	11	302
190,549	Canniff, George F., sr., Cleveland, Ohio. Carriage-top	May 8, 1877	450	133	11	813
	Canteton, William, *et al.* (*See* Groat, Elias, assignor.)					
187,962	Cantrell, Robert B., Brooklyn, N. Y. Dovetail tenon and mortise joint for joinery	Mar. 6, 1877	5	2	11	381
195,571	Capel, Charles, Macon, Ga., assignor of one-third interest to G. D. Davis, Jersey City, N. J. Lamp	Sept. 25, 1877	841	250	12	543
187,097	Capeling, Albert A., Rochester, N. Y. Dust-guard for sewing-machines	Feb. 6, 1877	174	57	11	226
196,333	Capewell, George J., Cheshire, Conn. Cutlery-grinding machine	Oct. 23, 1877	692	199	12	682
196,334	Same.....Machine for reducing metal	Oct. 23, 1877	693	199, 200	12	682
196,192	Capewell, Joseph T., assignor to W. S. Capewell, Woodbury, Conn. Dry-measure	Oct. 16, 1877	533	154	12	652
	Capewell, Walter S. (*See* Capewell, Joseph T., assignor.)					
198,428	Caple, Chauncey S., Frankfort, N. Y. Plaiting-machine	Dec. 25, 1877	819	248	12	1089
197,961	Capron, Ariel B., assignor of two-thirds interest to J. Converse, Stafford Springs, Conn., and L. M. Capron, Worcester, Mass. Shuttle-box mechanism	Dec. 11, 1877	261	81	12	992
	Capron, Eliab W. (*See* Cole, George P., assignor.)					
186,987	Capron, Frank E., Providence, R. I. Cuff-button, stud, &c	Feb. 6, 1877	75	25	11	211, 212
193,639	Capron, Jacob, New York, N. Y. Wicket-slide for car-doors	July 31, 1877	1147	343	12	202
195,741	Same.....Latch for car-doors	Nov. 6, 1877	4	2	12	761
190,002	Capron, Le Roy, Akron, Ohio. Car-heater	Apr. 24, 1877	1033	315	11	717
	Capron, Luther M., *et al.* (*See* Capron, Ariel B., assignor.)					
	Cara, Martin W., *et al.* (*See* Shaw, Ai B., assignor.)					
192,361	Card, Benjamin F., Brooklyn, N. Y. Electro-magnetic registering apparatus for tura-stiles	June 26, 1877	902	270, 271	11	1124
193,596	Same.....Torch	July 31, 1877	1093	329	12	196
194,578	Card, Edward, and I. Lindsley, Pawtucket, R. I. Package-holder	Aug. 28, 1877	825	245	12	367
194,892	Cardot, Charles W., assignor to self, C. L. Jeffords, and J. H. Clark, Jamestown, N. Y. Machine for making axes	Sept. 4, 1877	132	41	12	419
186,709	Carey, Augustus C., Malden, Mass. Bobbin-winder for sewing-machines	Jan. 30, 1877	910	282	11	165, 166
189,301	Carey, Philip, Philadelphia, Pa. Composition covering for steam-pipe	Apr. 10, 1877	298	91	11	605
197,456	Cargill, Hawley N., Grand Rapids, Mich. Tunneling and excavating machine	Nov. 27, 1877	776	232	12	898
191,567	Carhartt, James, Pontiac, Mich. Stove-pipe thimble	June 5, 1877	55	16	11	984
	Carle, Paul W. (*See* Konz, Sebastian, assignor.)					
198,506	Carlile, William W., Ione City, Cal. Portable hoisting apparatus or wagon-derrick	Dec. 25, 1877	836	254	12	10.1
	Carlton, Ezra C., *et al.* (*See* Wood, George H., assignor.)					
196,071	Carlton, William C., assignor to W. B. Morris, Boise City, Idaho. Axle-gage	Oct. 16, 1877	403	117	12	634
197,542	Carman, Myron A., Canandaigua, N. Y. Box or package	Nov. 27, 1877	858	253	12	912
187,215	Carmichael, Peter D. M., Le Roy, N. Y. Rotary engine	Feb. 13, 1877	292	97	11	255
190,418	Carnahan, Cyrus M., Utica, Pa. Car-coupling	May 8, 1877	321	94	11	796
197,543	Carnes, Herbert W., Brookline, Mass. Basin-stopper	Nov. 27, 1877	860	258	12	912
192,323	Carney, Edwin, Lockport, N. Y. Mortise-chisel	June 26, 1877	865	261	11	1119
197,923	Carney, George J., Lowell, Mass. Nut-lock	Dec. 11, 1877	225	69	12	987
186,032	Caro, Heinreich, Mannheim, Germany. Obtaining coloring-matter suitable for dyeing and printing	Jan. 9, 1877	222		11	46
185,893	Carpenter, Allan, New York, N. Y. Feed-water heater	Jan. 2, 1877	80	24	11	18

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
189,187	Carpenter, Burr E., Plain City, Ohio. Pitman-rod	Apr. 3, 1877	153	53	11	580
189,841	Carpenter, Harvey, Plain City, Ohio. Washing-machine	Apr. 24, 1877	870	265	11	696
187,963	Carpenter, James, Southampton, England. Boat-detaching apparatus	Mar. 6, 1877	7	2	11	381
189,603	Carpenter, James H., New York, N. Y., assignor of one-fifth interest to G. Newton, Saint Louis, Mo. Steering-propeller	Apr. 17, 1877	608	188, 189	11	654
192,414	Carpenter, John W., Bridgewater, Va. Harrow	June 26, 1877	952	285	11	1130
187,355	Carpenter, Ralph R., Tippecanoe, Ohio. Car-starter	Feb. 13, 1877	440	138	11	274
194,411	Carpenter, Ralph R., Tippecanoe City, Ohio. Car-axle box	Aug. 21, 1877	649	195	12	335
197,544	Carpenter, William H., Saint Joseph, Mo. Gate-latch	Nov. 27, 1877	870	259	12	912
186,924	Carp'es, Bernard, and J. M. Koehler, New York, N. Y. Treating animal bones and making artificial whalebones therefrom	Feb. 6, 1877	5		11	203
186,539	Carr, Adam, Paterson, and J. Arthurs, Jersey City, N. J.; assignors to said Carr. Pumping engine	Jan. 23, 1877	743	228	11	133
188,338	Carr, Edward B., Snydertown, Pa. Straw-cutter	Mar. 13, 1877	380	119	11	437
194,219	Carr, John, Milwaukee, Wis. Thill-coupling	Aug. 14, 1877	447	136	12	301
195,702	Carr, John C., Logan County, Kentucky. Road-engine	Oct. 2, 1877	11	3	12	562
197,719	Carr, William, Yellow Springs, Ohio. Thrashing-machine	Dec. 4, 1877	10	4	12	948
7,626	Carr, William S., New York, N. Y., assignor to C. M. Keller and C. F. Blake, trustees. Water-closet (Reissue)	Apr. 24, 1877	1160	352	11	734
187,354	Carré, Ferdinand P. E., and E. Jullien, Paris, France. Refrigerating apparatus	Feb. 13, 1877	434	137, 138	11	273, 274
193,481	Carriére, Paul, Ganges, France. Governor for steam-engines	July 24, 1877	960	292	12	167
	Carrington, Sterling R. (*See* Lawrence, James R., assignor.)					
196,629	Carroll, Charles, and F. B. Lee, New Orleans, La.; said Lee assignor to said Carroll. Toilet-case	Oct. 30, 1877	995	290	12	737
197,995	Carroll, David, Spring Creek, Pa. Ship's log	Dec. 11, 1877	296	91	12	997
191,652	Carroll, Frank M., and J. Lamb, Grand Rapids, Mich. Fly-trap	June 5, 1877	133	42	11	944
	Carroll, Peter V., *et al.* (*See* Cleveland & McConnell, assignors.)					
187,510	Carroll, Thomas J., assignor of one-half interest to F. A. Nickerson, Bridgeport, Conn. Coil-spring-band	Feb. 20, 1877	605	187, 188	11	302
197,600	Carroll, Thomas J., assignor to E. L. White, Bridgeport, Conn. Clasp	Nov. 27, 1877	925	276	12	920
7,924	Carroll, William J., Natchez, Miss. assignor to American Cotton-Tie Company, limited. (Reissue)	Oct. 23, 1877	880	254	12	708
192,563	Carroll, William J., Natchez, Miss. Endless-chain propeller	July 3, 1877	8	3	12	13
7,575	Carroll, William T., Worcester, assignor to G. and W. F. Draper, Hopedale, Mass. Ring for spinning-machines (Reissue)	Mar. 27, 1877	1072	330	11	549
189,548	Carrozzi, G., Napoleone, Chicago, Ill. Attachment for key-board musical instruments	Apr. 17, 1877	553	172	11	647
193,482	Carruth, James A., Topeka, Kans. Perforator for printing-presses	July 24, 1877	962	292	12	167
	Carson Brothers. (*See* Fox, Francis J., assignor.)					
196,112	Carson, John, Jerseyville, Ill. Agricultural-boiler	Oct. 16, 1877	454	132	12	641
	Carson, John B., *et al.* (*See* French, Bridget, assignor.)					
185,819	Carson, John M., Louisville, Ky. Kitchen-sink	Jan. 2, 1877	6	3	11	10
195,572	Carswell, Edwin T., Wilmington, Del. Lifting-jack	Sept. 25, 1877	812	250	12	543
	Carter, Artemas N., *et al.* (*See* Sawyer, Frederick A., assignor.)					
192,564	Carter, Durus, Baltimore, Md. Volute motor-spring	July 3, 1877	8	3	12	14
	Carter, E. W. (*See* Carter, John W., assignor.)					
187,811	Carter, Henry, assignor of one-half interest to D. Stewart, Aylmer, Canada. Hand-rubber	Feb. 27, 1877	914	284	11	352
191,109	Same.....Mortising-machine	May 22, 1877	1033	309	11	905
7,685	Carter, Henry S., Chicago, Ill. Folding-lounge (Reissue)	May 15, 1877	872	258	11	875
188,499	Carter, Jesse, Lake City, Fla. Rice-cleaning machine	Mar. 20, 1877	551	170	11	469
194,953	Carter, John W., Brooklyn, N. Y., assignor to Cleveland Non-Explosive Lamp Company, Cleveland, Ohio. Font for oil-lamps	Sept. 11, 1877	209	65	12	437
196,430	Carter, John W., assignor to E. W. Carter, Brooklyn, N. Y. Extension chandelier	Oct. 23, 1877	778	225	12	695
197,599	Carter, Mordecai, Plainfield, Ind. Gate	Nov. 27, 1877	925	276	12	919
189,188	Carter, Robert A., Pittsburg, Pa. Machine for rolling metallic rings and cylinders	Apr. 3, 1877	154	54	11	580
189,189	Carter, Roderick C., Kingston, Canada. Envelope	Apr. 3, 1877	155	54	11	580
	Carter, Thomas D. (*See* Hildebrand, George A., assignor.)					
191,831	Carter, William, Masham, England. Packing-case	June 12, 1877	318	98	11	1023
187,810	Carter, Wirt L., Monroe, Mich. Lamp-burner	Feb. 27, 1877	914	283	11	351
192,679	Cartisser, Charles J., New York, N. Y. Ornamenting glass	July 3, 1877	134	37	12	30
	Cartle, Alexander W. (*See* Long & Cartle.)					
192,678	Carvalho, Solomon N., assignor to self and J. M. Patter, New York, N. Y. Steam-boiler and superheater	July 3, 1877	133	37	12	30
194,577	Carver, George H., and E. A. Munger, Plano, Ill. Mail-bag catch	Aug. 28, 1877	824	245	12	367
191,753	Carver, Lloyd B., Xenia, Ind. Railway-signal	June 12, 1877	237	75	11	1014
187,253	Carver, Thomas F., Worcester, Mass. Rest for metal laths	Feb. 13, 1877	433	136	11	273
188,856	Carvers, Henry E., assignor of one-half interest to A. J. Beardman, Marion, Iowa. Sulky-plow	Mar. 27, 1877	916	278	11	528
	Case & Co., J. I. (*See* Erskine & Weed, assignors.)					
	Same.....(*See* Erskine, Massena B., assignor.)					
	Same.....(*See* Field, John A., assignor.)					
	Same.....(*See* Weed & Bell, assignors.)					
	Same.....(*See* Weed, Clinton A., assignor.)					
	Case, Albert H. (*See* Martin, Albert D., assignor.)					
191,027	Case, Andrew A., and E. W. Bedell, Chetopah, Kans. Game and cartridge belt	May 22, 1877	959	284	11	895
	Case, Charles C. (*See* Case, Thomas J. and C. C.)					
194,127	Case, Jarvis, Washington Court-House, Ohio. Corn-planter	Aug. 14, 1877	365	109	12	289
195,793	Case, John M., Columbus, Ohio. Turbine water-wheel	Oct. 2, 1877	97	29	12	575
195,794	Same.....Heating and drying apparatus	Oct. 2, 1877	99	29	12	575
	Case, Joseph A., *et al.* (*See* Morgan, Alfred F., assignor.)					
191,110	Case, Thomas J., Granger, and C. C. Case, Cleveland, Ohio. Lifting-jack	May 22, 1877	1035	309	11	905
194,128	Casey, Peter, Providence, R. I. Horse-clipping machine	Aug. 14, 1877	368	109	12	289
196,874	Casey, Thomas W., Brooklyn, N. Y. Life-boat	Nov. 6, 1877	145	43	12	781
191,401	Cash, Eran F., and A. L. Baron, Bellaire, Ohio. Lantern	May 29, 1877	1314	399	11	952
188,001	Cashman, Dennis J., Hanover, Mass. Truck for harvesters	Mar. 6, 1877	44	12	11	386
192,680	Cashner, William, Pleasant Hill, Mo. Sash-balance	July 3, 1877	135	37	12	30
193,805	Cas.lear, George W., Washington, D. C. Hard-metal type	Aug. 7, 1877	9	3	12	236
194,648	Casper, Edward, assignor to F. C. De Lousada, London, England, and W. D. S. Moncrieff, Glasgow, Scotland. Temporary binder	Aug. 28, 1877	883	263		376
196,630	Casper, Frederick, Plainfield, N. J. Sash-fastener	Oct. 30, 1877	996	290	12	737
7,943	Cassaday, William L., New Carlisle, Ind. Sulky-plow (Reissue)	Nov. 13, 1877	488	145	12	839
188,500	Cassiano, I. Ygnacio, San Antonia, Tex. Adjustable hat	Mar. 20, 1877	552	170	11	470

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
189,081	Cassel, David H., and G. W. Zint, Crestline, Ohio. Knife-scouring pan	Apr. 3, 1877	63	23	11	567
193,922	Cassel, Henry R., New York, N. Y. Electro-plated shell or cylinder for imitating leather, &c	Aug. 7, 1877	120	38	12	251
	Cassidey, Francis A. L. (*See* Ross & Cassidey.)					
197,601	Cassidy, James J., Boston, Mass. Apparatus for distributing powder	Nov. 27, 1877	926	276	12	920
191,310	Cassil, Philip W., New Athens, Ohio. Tire-heater	May 29, 1877	1239	373	11	942
186,294	Cassinelli, Jean B. D., Paris, France. Combustible compound	Jan. 16, 1877	472		11	87
193,483	Castellanos, Prudencio, San Francisco, Cal. Blasting-cartridge	July 24, 1877	962	292	12	167
193,484	Same same	July 24, 1877	963		12	167
193,485	Same Device for exploding mining-powders	July 24, 1877	964	293	12	167
186,229	Casterline, Henry F., Grand Detour, Ill. Device for drawing pulleys from shafting	Jan. 16, 1877	417	128	11	79
	Castle, Samuel A. (*See* Havens, Frederick A., assignor.)					
192,415	Castleman, James W., Cumberland Iron Works, Tenn. Apparatus for loading and unloading wagons, &c	June 26, 1877	954	286	12	1130
194,290	Caswell, Ezra, Lyons, N. Y. Hub-borer	Aug. 21, 1877	533	161	12	319
194,802	Caswell, Henry J., Dudswell, Canada. Scaffolding	Sept. 4, 1877	49	16	12	407
190,666	Cate, Aaron B., Washington, D. C. Bag-fastener	May 15, 1877	594	176	11	839
	Cates, R. S. (*See* Cates, William A., assignor.)					
197,246	Cates, William A., assignor of one-half interest to R. S. Cates, Union, Oreg. Geographical clock	Nov. 20, 1877	252	163	12	856
191,111	Cather, Edwin, assignor of one-half interest to J. R. Trimble, Baltimore, Md. Machine for compressing the ends of blind-slats	May 22, 1877	1035	309	11	905
197,247	Catlin, Abel D., Seneca Falls, N. Y. Car-starter	Nov. 20, 1877	253	163	12	856
190,550	Catlin, Charles A., and G. F. Wilson, Providence, R. I. Utilizing tin-scrap	May 8, 1877	851	133	11	813
195,884	Catlow, Robert, assignor to Stearns & Foster, Cincinnati, Ohio. Cotton-batting folding-machine	Oct. 9, 1877	200	57	12	598
190,003	Caughy, Noah W., Baltimore, Md. Neck-band	Apr. 24, 1877	1034	315	11	717
189,604	Cauhape, Pierre, assignor to self and E. Greenfield, New York, N. Y. Tobacco-package	Apr. 17, 1877	600	189	11	654
7,817	Caulier, Frederick, Philadelphia, Pa., assignor, by mesne assignments, to New England Wardrobe-Bedstead Company. Wardrobe-bedstead (Reissue)	July 31, 1877	1300	390	12	223
187,454	Caulier, Frederick, Philadelphia, Pa., assignor, by mesne assignment, to New England Wardrobe-Bedstead Manufacturing Company, Boston, Mass. Wardrobe-bedstead	Feb. 20, 1877	552	170	11	295
186,540	Cauty, Henry E., Liverpool, England. Poultice	Jan. 23, 1877	744	228	11	133
195,795	Cavalier, Peter, Yankton, Dak. Spring-motor	Oct. 2, 1877	101	30	12	576
187,455	Cavanaugh, Patrick H., Springfield, Ohio. Grain or seed drill	Feb. 20, 1877	553	171	11	295
195,980	Cave, George J., and G. E. Nicholson, Elizabeth, N. J.; said Nicholson assignor to said Cave. Gage attachment for beer-measures	Oct. 9, 1877	305	85	12	611
191,930	Cayce, John M., Franklin, Tenn. Weight-motor	June 12, 1877	408	127	11	1035
187,254	Caylor, Edward H., West Elkton, Ohio. Ironing-table	Feb. 13, 1877	337	107	11	260
	Celluloid Harness Trimming Company. (*See* Lockwood, David C., assignor.)					
	Same (*See* Wiener, Oscar, assignor.)					
	Central Propelling Company. (*See* Crosby, Addison, assignor.)					
	Same (*See* Vivarttas, Aloha, assignor.)					
194,129	Cerero, Raphael, Havana, Cuba. Testing-machine	Aug. 14, 1877	369	109	12	290
	Chabot, Anthony. (*See* Austin, Alvah C., assignor.)					
191,402	Chace, Albert F., Fall River, Mass. Gas-regulator	May 29, 1877	1316	399	11	952
197,248	Chace, C. Sumner, East Freetown, Mass. Automatic railway-buffer	Nov. 20, 1877	254	163	12	856
188,002	Chadbourn, Charles H., assignor to Chapman Binder Company, Rochester, Minn. Harvester	Mar. 6, 1877	46	12	11	187
190,467	Chadbourn, Charles H., assignor, by mesne assignments, to self and J. M. Williams, Rochester, Minn. Wire-band cutting implement	May 8, 1877	372	108	11	803
	Chaddock, Hiram, *et al.* (*See* Morse, Edward P., assignor.)					
191,515	Chadwick, Charles, assignor of one-half interest to L. P. and W. A. Munger, Hannibal, Mo. Ice-cutting machine	June 5, 1877	5	2	11	977
191,654	Chadwick, Charles, assignor of one-half interest to P. B. Groat, Hannibal, Mo. Converting reciprocating into rotary motion	June 5, 1877	136	42	11	994
191,655	Same same	June 5, 1877	137	43	11	994
190,667	Chadwick, David C., Meadville, Pa. Churn	May 15, 1877	595	176	11	839
188,501	Chadwick, Edwin, Westfield, Mass. Heater	Mar. 20, 1877	552	170	11	470
	Chadwick, Edwin D., *et al.* (*See* Drake, John, assignor.)					
189,842	Chadwick, Horace E., Providence, R. I. Device for attaching horses to vehicles	Apr. 24, 1877	871	265	11	696
186,541	Chaffee, Charles I., Allegan, Mich. Guide for circular saws	Jan. 23, 1877	745	228	11	133 / 134
	Chalfant, George A., *et al.* (*See* Blakey, Mildred, assignor.)					
188,588	Chamberlain, Charles C., New York, N. Y. Bill-file	Mar. 20, 1877	632	195	11	481
194,579	Chamberlain, Den., Winona, Minn Coloring photographs	Aug. 28, 1877	827		12	368
195,340	Chamberlain, Dexter H., assignor to W. H. Ireland, Boston, Mass. Oiler	Sept. 18, 1877	610	179	12	502
188,281	Chamberlain, Dexter H., assignor to self and W. H. Ireland, Boston, Mass. Loom-shuttle	Mar. 13, 1877	323	102	11	429
195,796	Chamberlain, Edward H., Little Rock, Ark. Seeding attachment for harrows	Oct. 2, 1877	101	30	12	576
197,996	Chamberlain, James F., assignor to R. M. Wanzer, Hamilton, Canada. Take-up mechanism for sewing-machines	Dec. 11, 1877	297	91	12	997
	Chamberlain, W. S., *et al.* (*See* Milne, Robert D., assignor.)					
191,403	Chamberlin, Albert, North Abington, Mass. Sash-fastener	May 29, 1877	1316	399	11	952
187,456	Chambers, Cyrus, jr., and J. T., said Cyrus, jr., and M. B. Chambers, executors of E. Chambers, deceased, assignors to C. Chambers, jr., Philadelphia, Pa. Catch-hook for suspending leather	Feb. 20, 1877	554	171	11	296
	Chambers, Edwin, deceased. (*See* Chambers, Cyrus, jr., J. T., and E.)					
	Chambers, John T. (*See* Chambers, Cyrus, jr., J. T., and E.)					
194,220	Chambers, Josephus C., Newport, Ky. Lightning-rod and insulator	Aug. 14, 1877	448	136	12	301
187,098	Chambers, Matthew C., Green Point, N. Y. Slide-rest for spinning-tools	Feb. 6, 1877	175	57	11	226
	Chambers, M. B., executor. (*See* Chambers, Cyrus, jr., J. T., and E.)					
	Chambers, William B., *et al.* (*See* Farris, Robert, assignor.)					
	Champion Belt-Hook Company. (*See* Osborne, Henry F., assignor.)					
190,821	Champion, Remick W., New York, N. Y. Brush	May 15, 1877	736	218	11	858
	Champlain, William C. (*See* Churchill & Champlain.)					
196,072	Champlin, Justin F., assignor of one-half interest to E. Meyers, East Aurora, N. Y. Combined check-row and drill-planter	Oct. 16, 1877	406	118	12	631
193,923	Chandler, Benjamin F., Three Locusts, Ohio. Plow	Aug. 7, 1877	121	38	12	251
186,710	Chandler, George W., Moingona, Iowa. Railway-tie	Jan. 30, 1877	911	282	11	166
196,561	Chandler, George W., and S. H. Deering, Moingona, Iowa. Fence-post	Oct. 30, 1877	934	270	12	727
186,079	Chandler, Jesse, Warsaw, Ill. Weather-strip	Jan. 9, 1877	267	81	11	53
197,330	Chandler, Jesse, Barry, Ill. Sash-holder	Nov. 20, 1877	637	188	12	868

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
186,797	Chandler, Joel B., assignor to F. L. Tupper and M. A. Chandler, Clinton, La. Heat-fender for furnaces	Jan. 30, 1877	995	309	11	177
193,395	Chandler, John A., Monticello, Iowa. Wood-sawing machine	July 24, 1877	881	269	12	155
	Chandler, Lyman. (*See* Sperry & Chandler.)					
	Chandler, M. A., *et al.* (*See* Chandler, Joel B., assignor.)					
193,223	Chandler, Nelson A., and J. C. Boesch, Charleston, S. C. Machine for cutting soap	July 17, 1877	690	211	12	122
190,822	Chandler, Thomas E., Indianapolis, Ind. Muley-saw-mill	May 15, 1877	737	218	11	858
	Chandler, William M. (*See* Tyler, Chandler & Standish) (Reissue.)					
191,113	Chaney, Absalom S., Flora, Ill. Portable fence	May 22, 1877	1037	310	11	906
195,981	Same same	Oct. 9, 1877	306	85	12	611
	Chaney, Nathan P. (*See* Greene, Rollin C., assignor.)					
190,823	Channon, Henry, Chicago, Ill. Splicing wire rope	May 15, 1877	738	218	11	858
196,875	Chapell, Elisha S., South Boston, Mass. Pipe-coupling	Nov. 6, 1877	146	44	12	781
	Chapin, Edward V., *et al.* (*See* Heaton, William, assignor.)					
185,711	Chapin, Gilbert W., Brooklyn, N. Y. Bird-cage screen	Jan. 30, 1877	912	282	11	166
	Chapin, Henry A. (*See* Loet & Chapin.)					
186,796	Chapin, Henry A., assignor of one-half interest to C. C. Moulton, Springfield, Mass. Spring doubling and twisting machine	Jan. 30, 1877	994	309	11	177
191,832	Chapin, John E., New York, N. Y. Plaiting-machine	June 12, 1877	319	99	11	1023
186,197	Chapin, Philip, sr., Pine Meadow, Conn. Wrench	Jan. 16, 1877	392	119	11	76
191,653	Chapin, Woodruff, Silver Creek, N. Y. Vegetable-cutter	June 5, 1877	134	42	11	994
196,073	Chapin, Henry P., Georgetown, Mass. Booting-jack	Oct. 16, 1877	408	118	12	634
189,427	Chaplin, Orril R., Boston, Mass. Anti-friction bearing for revolving shaft-axles	Apr. 10, 1877	421	132	11	621
	Chapman Binder Company. (*See* Chadbourn, Charles H., assignor.)					
	Chapman Binder Company. (*See* Chapman, Edwin, assignor.)					
195,982	Chapman, Charles H., Shirley, assignor to self and G. Reed, Fitchburg, Mass. Mechanism for automatically stopping the feed-rolls of carding-engines	Oct. 9, 1877	306	85, 86	12	612
192,150	Chapman, Edwin, assignor to Chapman Binder Company. Rochester, Minn. Grain-binder	June 19, 1877	656	201	11	1079
192,151	Same same	June 19, 1877	658	201, 202	11	1080
197,016	Same same	Nov. 13, 1877	295	87	12	810
	Chapman, Emory W. (*See* McMurphy & Chapman.)					
	Chapman, Friend J. (*See* Goodrich & Chapman.)					
188,190	Chapman, George A., Woonsocket, R. I. Shaft-coupling	Apr. 3, 1877	156	54	11	580
198,348	Chapman, Harriet M., Philadelphia, Pa. Corset	Dec. 18, 1877	665	202	12	1057
195,573	Chapman, Henry and S. H., assignors to said H. Chapman, Philadelphia, Pa. Process of and apparatus for drying brewers' grains	Sept. 25, 1877	843	250, 251	12	543
194,989	Chapman, Henry W., Blue Rapids, Kans. Fire-escape	Sept. 11, 1877	244	74	12	441
190,820	Chapman, Herbert W., Newark, N. J. Breech-loading fire-arm	May 15, 1877	736	218	11	858
198,349	Chapman, Jacob, West Bay City, Mich. Car-coupling	Dec. 18, 1877	666	202	12	1057
197,997	Chapman, John B., Boston, Mass. Spike-extractor	Dec. 11, 1877	298	85	12	997
186,001	Chapman, Joseph, Dubuque, Iowa. Postal circular	Jan. 9, 1877	194	59	11	43
194,803	Chapman, Luke, assignor of one-half interest to Collins Company, Collinsville, Conn. Wheel-plow	Sept. 4, 1877	50	16, 17	12	407
7,477	Chapman, Nathan, Hopedale, Mass., assignor, by mesne assignments, to Dutcher Temple Company. Machine for setting temple-teeth (Reissue)	Jan. 30, 1877	1117	345, 346	11	192
	Chapman, N. W., *et al.* (*See* Huerta, Manuel, assignor.)					
	Chapman, Rebecca. (*See* Crawford, John, assignor.)					
197,329	Chapman, Samuel A., Waterbury, Conn. Stringing sleigh-bells	Nov. 20, 1877	637	188	12	868
	Chapman, Samuel H. (*See* Chapman, Henry and S. H.)					
196,431	Chapman, Samuel J., assignor to D. S. Silcox, Charleston, S. C. Bale-band tightener	Oct. 23, 1877	779	225	12	695
196,432	Same Bale-tie	Oct. 23, 1877	782	325	12	696
196,433	Chapman, Samuel J., assignor of one-half interest to D. S. Silcox, Charleston, S. C. Bale-tie	Oct. 23, 1877	783	226	12	696
190,004	Chappel, George, Brooklyn, N. Y. Lamp	Apr. 24, 1877	1034	315	11	718
	Chappell, John C. (*See* Minnick, Alexander P., assignor.)					
190,551	Charageat, Emile, Paris, France. Umbrella	May 8, 1877	852	134	11	813
	Chard, Howe & Weber. (*See* Burnett, James H., assignor.)					
196,676	Charles, Homer, jr., East Java, N. Y. Potato-bug gatherer	Nov. 6, 1877	147	44	12	781
186,542	Charles, Sylvester, Healdsburg, Cal. Quicksilver-furnace	Jan. 23, 1877	745	229	11	134
195,341	Charlton, John, assignor to J. Charlton, jr., Newark, N. J. Mechanism for setting eyelet-hooks	Sept. 18, 1877	610	179	12	502
190,552	Chartrey, Raoul, San Francisco, Cal. Washing-machine	May 8, 1877	854	134	11	813
193,690	Chase, Alfred H., Dowagiac, Mich. Heating-stove	July 31, 1877	1197	358	12	209
191,112	Chase, Amos, Weare, N. H. Machine for cutting out pasteboard egg-carrier blanks	May 22, 1877	1036	310	11	906
	Chase, Charles A., *et al.* (*See* Bliss, Francis D., assignor.)					
197,331	Chase, Charles M., and A. C. Gould, Boston, Mass., assignors to said Gould. Spool-printing machine	Nov. 20, 1877	638	188	12	868
	Chase, Ethan A., *et al.* (*See* Burbank, Abner, assignor.)					
198,350	Chase, George, Buffalo, N. Y. Chimney-cap	Dec. 18, 1877	666	203	12	1058
188,191	Chase, Henry A., assignor of one-half interest to S. A. Hubbard and C. H. Clark, Hartford, Conn. Locking-latch	Apr. 3, 1877	156	55	11	580
189,921	Chase, Jefferson, Orange, Mass. Pruning-implement	Apr. 24, 1877	947	289	11	706
197,512	Same Steam cooking-apparatus	Nov. 27, 1877	835	249	12	906
191,001	Chase, Job, Langworthy, Iowa. Hay-stacker	May 22, 1877	932	75, 276	11	891
198,275	Chase, John F., Deep River, Conn. Spring-plow clevis	Dec. 18, 1877	604	183	12	1048
186,103	Chase, Lucius C., Boston, Mass. Horse-blanket, carriage-robe, &c.	Jan. 9, 1877	294	88	11	56
198,351	Chase, Marcellus W., Buffalo, N. Y. Heater for desks and seats	Dec. 18, 1877	667	203, 204	12	1058
198,352	Same School-furniture	Dec. 18, 1877	668	204	12	1058
195,983	Chase, Mary S., Boston, Mass. Night-lamp	Oct. 9, 1877	308	86	12	612
194,954	Chase, Oliver R., Boston, Mass. Machine for making cable-pipe candies	Sept. 11, 1877	210	65	12	437
194,955	Same Machine for paring cocoanuts	Sept. 11, 1877	211	65	12	437
187,812	Chase, Oscar, Rutland, Ohio. Churn	Feb. 27, 1877	915	284	11	352
	Chase, Theodore L., *et al.* (*See* Phelps, Ira M., assignor.)					
195,090	Chase, William K., assignor of one-half interest to C. H. Weston, Lowell, Mass. Gas-pipe and burner for preventing frost on show-windows	Sept. 11, 1877	350	106	12	456
196,434	Chatillon, George H., New York, N. Y. Spring-scale for weighing	Oct. 23, 1877	784	226	12	696
	Chattaway, James. (*See* Read & Howell, assignors.)					
191,404	Chatterton, Richard D., Cobourg, Canada. Railway-car bumper	May 29, 1877	1317	399, 400	11	953
187,748	Cheatham, James C., Decatur, Ill. Roofing-composition	Feb. 27, 1877	847		11	313

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Cheek, James W. (*See* Robertson, William T., assignor.)					
191,028	Cheek, James W., Asheville, N. C. Clothes-washer	May 22, 1877	959	284	11	895
7,814	Cheetham, Linneus, Lewiston, Me., assignor to G. Draper. Spindle-bearing for spinning-machines (Reissue)	July 24, 1877	1085	324	12	182
	Cheever, John H. (*See* Forsyth, James B., assignor) (Reissue.)					
192,230	Chelini, Giacomo, Washington, D. C. Ironing-table	June 19, 1877	739	225	11	1091
192,681	Cheney, Edward, Geneva Lake, Wis. Rocking-device for harvesters	July 3, 1877	136	37	12	30
198,079	Cheney, George W., Washington, D. C., and D. C. Butterfield, New York, assignors to selves, T. J. Van Wyck, and C. M. Nichols, jr., Brooklyn, and J. T. Salter, New York, N. Y., and S. D. Sweetser, East Hampton, Mass. Ore roasting and smelting furnace.	Dec. 11, 1877	370	115	12	1009
193,806	Cherrington, Robert E., Holyoke, assignor to C. Guild, Boston, Mass. Currier's knife	Aug. 7, 1877	10	4	12	236
191,114	Cherry, Austin G., and A. P. Elliott, Sturgis, Mich. Gate	May 22, 1877	1037	310, 311	11	906
195,091	Cherry, Hamilton, and H. E. Wheeler, Aurora, Ill. Barbed-wire fence	Sept. 11, 1877	351	106	12	456
189,605	Cherry, Isaac N. and R. N., Jersey City, N. J. Self-rake for harvesters	Apr. 17, 1877	611	189	11	654
187,813	Cherry, Peterson H., Parsons, Kans. Grain-scales	Feb. 27, 1877	916	284	11	352
	Cherry, Robert N. (*See* Cherry, Isaac N. and R. N.)					
186,412	Chesebro', Denison S., Geddes, N. Y. Stoneware jar	Jan. 23, 1877	625	190	11	117, 118
185,894	Chess, Harvey B., Pittsburg, Pa. Machine for assorting nails	Jan. 2, 1877	80	24	11	18
186,404	Same.....Annealing-furnace	Jan. 16, 1877	606	186	11	102
188,777	Chester, William, Brooklyn, assignor to R. Hoe & Co., New York, N. Y. Printers' bodkin	Mar. 27, 1877	836	254	11	517
	Chestnut, John A., *et al.* (*See* Jacoby, D. W., assignor) (Reissue.)					
	Chestnut, John A., *et al.* (*See* Woods, Columbus, assignor.)					
	Chestnut, J. William. (*See* Seymour, Alfred B., assignor.)					
	Chetlain, Arthur H., administrator. (*See* Clemens, S. A.)					
188,102	Chewning, John W., jr., Shadwell Depot, Va., assignor to self, T. C. Ferebee, Camden Court-House, N. C., and J. M. Wallace, Deep Creek, Va. Horseshoe-machine	Mar. 6, 1877	133	40	11	398
7,713	Chichester, Lewis S., Brooklyn, assignor, by mesne assignment, to G. H. Nichols and C. W. Mills, New York, N. Y. Grain-drier (Reissue)	May 29, 1877	1453	437	11	968
192,362	Chichester, Lewis S., New York, N. Y. Device for and method of cooking cereals	June 26, 1877	903	271	11	1124
197,332	Chickering, Charles F., New York, N. Y. Piano-forte	Nov. 20, 1877	639	189	12	869
186,988	Chilcott, Amon W., Cassville, Pa. Mousing-hook	Feb. 6, 1877	76	26	11	212
	Childs, William E. (*See* Murray, Charles E., assignor.)					
	Chinn, Richard H. (*See* Miller, George F., assignor.)					
194,860	Chinnock, Charles, Brooklyn, N. Y. Filler-mouth for lamps, &c	Sept. 4, 1877	104	33	12	415
197,826	Chinnock, Charles E., Brooklyn, N. Y. Electro-magnetic time-lock	Dec. 4, 1877	119	37	12	963
7,634	Chinnock, George H., New York, N. Y. Lamp-burner (Reissue)	Apr. 24, 1877	1171	355	11	735
187,216	Chinnock, George H., Brooklyn, N. Y. Sheet-metal can	Feb. 13, 1877	299	97	11	255
188,339	Same.....Translucent shade-holder	Mar. 13, 1877	381	119	11	437
190,824	Chinnock, George H., assignor, by mesne assignments, to L. N. Mowry & Co., New York, N. Y. Spring-scales	May 15, 1877	738	219	11	858
194,331	Chipman, De Witt C., Richmond, Ind. Car-heater	Aug. 21, 1877	576	172	12	325
197,827	Chisholm, Wilson B., Cleveland, Ohio. Rail-joint	Dec. 4, 1877	121	37	12	963
193,110	Chism, Wesley L., Ankeny, Iowa. Corn-planter	July 17, 1877	582	176	12	107
196,968	Chittenden, Morgan, assignor to self, P. Robinson, and T. Demuth, Danbury, Conn. Sizing-machine for felt, &c	Nov. 13, 1877	250	74	12	804
189,842	Choate, David, New York, N. Y. Ironing-table	Apr. 24, 1877	871	266	11	696
191,311	Choate, Greene, East Saginaw, Mich. Device for punching sheet-metal for pipe-elbows	May 29, 1877	1240	373	11	942
191,312	Same.....Device for cutting sheet-metal for curved pipe-elbows	May 29, 1877	1241	373	11	942
193,847	Same.....Stove-pipe elbow	Aug. 7, 1877	47	15	12	241
196,785	Same.....Pipe-elbow-seaming machine	Nov. 6, 1877	47	15	12	767
188,003	Chodrick, George W., Stockton, Mo. Broom-machine	Mar. 6, 1877	47	12	11	187
198,353	Chollar, Byron E., assignor to Safety Carbureter Company, Chicago, Ill. Automatic feed-regulator for carbureters	Dec. 18, 1877	669	204	12	1058
196,969	Chrispensen, Christian K., Rock County, Wisconsin. Smoothing-harrow	Nov. 13, 1877	251	75	12	804
189,922	Christen, Fred., Homestead, Iowa. Shuttle-box mechanism for looms	Apr. 24, 1877	947	290	11	707
190,741	Same.....Stop-motion for looms	May 15, 1877	668	198	11	848
194,412	Christen, Frederick, Homestead, Iowa. Carding-machine	Aug. 21, 1877	650	195	12	335
192,363	Christey, Arthur, Buffalo, N. Y. Envelope	June 26, 1877	905	271	11	1124
186,798	Christin, Arthur, Chicago, Ill. Bottling-machine	Jan. 30, 1877	996	309	11	177
192,110	Christinger, John C., Bristol, Conn. Sofa-bedstead	June 19, 1877	612	186, 187	11	1074
193,691	Christopherson, Mathias, Chicago, Ill. Feeding mechanism for sewing-machines	July 31, 1877	1197	358, 359	12	209
192,737	Christrup, Knud M., and C. F. Schneider; said Schneider assignor to F. Korupkat, Saint Louis, Mo. Corn-planter	July 3, 1877	177	51	12	37
192,634	Christy, William T., Saint Louis, Mo. Brick-kiln	July 3, 1877	80	24	12	23
195,797	Chubbuck, Charles H., Chicago, Ill. Horseshoe	Oct. 2, 1877	102	30	12	576
	Chubbuck, Isaac Y., *et al.* (*See* Chubbuck, Stillman E., assignor.)					
186,230	Chubbuck, Otis J., Towanda, Pa. Grain-separator	Jan. 16, 1877	418	128	11	79
	Chubbuck, Stillman E., jr., *et al.* (*See* Chubbuck, Stillman E., assignor.)					
185,895	Chubbuck, Stillman E., assignor to self, I. Y., and S. E. Chubbuck, jr., Boston, Mass. Elevator	Jan. 2, 1877	82	25	11	18
193,224	Church, Benjamin S., Scarborough, N. Y. Pedometer	July 17, 1877	690	211	12	122
191,568	Church, Eugene L., Walworth, Wis. Hay-elevator	June 5, 1877	55	17	11	984
188,587	Church, George A., assignor to E. L. Montgomery, Nevada City, Cal. Ore-feeder for quartz-mills	Mar. 20, 1877	631	195	11	481
190,553	Church, George M., Rogersville, Pa. Coal-box	May 8, 1877	855	134	11	813
196,074	Church, George W., Gardiner, Me. Bolting-gage	Oct. 16, 1877	408	118	12	635
193,924	Church, Leonard C., and J. C. Perkins, Kalamazoo, Mich. Fruit-drier	Aug. 7, 1877	121	38	12	251
194,861	Church, Titus S., Boston, Mass. Destroying vermin	Sept. 4, 1877	105		12	415
186,411	Church, William L., Havana, assignor to Ludlow Valve Manufacturing Company, Troy, N. Y. Lateral-water pipe	Jan. 23, 1877	624	190	11	117
	Churchill, John A. (*See* Turley, Marshall, assignor.)					
187,099	Churchill, John A., Council Bluffs, Iowa. Hame	Feb. 6, 1877	175	57	11	226
190,825	Churchill, Robert W., assignor of one-half interest to C. E. Alvord, Bridgeport, Conn. Toy-pistol	May 15, 1877	739	219	11	858
192,738	Churchill, William H., New London, Conn., and W. C. Champlain, Harrisburg, Pa. Capstan and propeller attachment for vessels	July 3, 1877	178	52	12	37
194,548	Churchill, Willis, Newark, N. J. Speed-indicator for shafting	Aug. 28, 1877	799	238	12	464
195,258	Churchman, Thomas C., Sacramento, Cal. Horse-power	Sept. 18, 1877	537	156	12	491

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Cincinnati Coffin Company. (*See* Hogue, Jacob A., assignor.)					
	Cipperley, John W., *et al.* (*See* Randel, William, assignor.)					
188,282	Cisar, Ferd, and F. Sochnrek, Milwaukee, Wis. Beer-cooler	Mar. 13, 1877	324	102	11	429
192,111	Clair, John B., assignor of one-half interest to J. W. Waldron, Old Town, Me. Crimping-form for boot-uppers	June 19, 1877	613	187	11	1075
193,319	Clanton, Ethelbert J., Woodland, Cal. Feeder for thrashing-machine	July 24, 1877	810	249	12	146
195,342	Clapp, Cyrus C., Hartford, Conn. Faucet	Sept. 18, 1877	611	180	12	502
194,292	Clapp, Emerous D, and F. Van Patten, Auburn, N. Y. Blank for shifting-rails of carriages	Aug. 21, 1877	536	162	12	320
194,293	Same.....same	Aug. 21, 1877	536	162	12	320
189,549	Clapp, Henry W., Concord, N. H. Stench-trap for catch-basins and sewers	Apr. 17, 1877	554	172	11	647
187,704	Clare, George T., New York, N. Y. Illustrated perforated card-board	Feb. 27, 1877	807	250	11	338
	Clark & Co., W. P. (*See* French & Hunting, assignors.)					
189,698	Clark, Alfred L., Dubuque, Iowa. Leaf-turner	Apr. 17, 1877	701	216	11	666
191,115	Same.....Fire-escape	May 22, 1877	1038	311	11	906
196,786	Clark, Allison N., Plainville, Conn. Watch-case spring	Nov. 6, 1877	48	15	12	767
187,356	Clark, Anslem R., Northfie'd, Minn. Moth-proof safe	Feb. 13, 1877	441	138	11	274
	Clark, Carlos W., *et al.* (*See* Sperry, Alfred W., assignor.)					
195,574	Clark, Charles B., Buffalo, N. Y. Butt-hinge	Sept. 25, 1877	844	251	12	544
	Clark, C. H., *et al.* (*See* Chase, Henry A., assignor.)					
195,798	Clark, Charles B., Buffalo, N. Y. Gate-latch	Oct. 2, 1877	103	30	12	576
186,801	Clark, Charles S., New Orleans, La. Washing-machine	Jan. 30, 1877	998	310	11	177
	Clark, Charles T. (*See* Munn, Clark & Brennan.)					
196,193	Clark, Daniel J. and W. A., West Meriden, Conn. Drawer-pull	Oct. 16, 1877	534	155	12	652
194,130	Clark, Edward, New York, N. Y. Refrigerator	Aug. 14, 1877	370	109, 110	12	290
197,603	Clark, Frank H., Newark, N. J. Swing	Nov. 27, 1877	928	277	12	920
192,635	Clark, George, assignor of part interest to F. H. Gatchell, J. M. Merritt, and M. Brown, Buffalo, and N. B. Gatchell, Lancaster, N. Y. Apparatus for refining and aging alcoholic liquors	July 3, 1877	81	24	12	23
191,569	Clark, George D., Plainville, Conn. Ripping-tool	June 5, 1877	56	17	11	984
193,142	Same.....Oil-can holder for sewing-machine tables	July 17, 1877	608	184	12	111
192,566	Clark, George G., Winterset, Iowa. Window-washer	July 3, 1877	10	3	12	14
188,340	Clark, George H., Lapeer, Mich. Stump-extractor	Mar. 13, 1877	381	119	11	438
	Clark, George M. (*See* Harris, Arthur, assignor.)					
191,405	Clark, George M., and A. Harris, Chicago, Ill. Soldering process	May 29, 1877	1318	400	11	953
192,055	Clark, George P., Windsor Locks, Conn. Wheel for trucks, casters, &c	June 19, 1877	562	171	11	1068
191,313	Clark, George S., and W. M. Pursell, assignors to said Clark and J. O'Ferrall & Co., Piqua, Ohio. Tile-machine	May 29, 1877	1241	373	11	942
192,231	Clark, George W., assignor of one-half interest to J. Flading, Wheeling, W. Va. Sash-holder	June 19, 1877	740	226	11	1091
194,804	Clark, Henry L., and A. B. Smith, Chester, N. Y. Sash-fastener	Sept. 4, 1877	51	17	12	407
195,480	Clark, Henry M., assignor to Stanley Rule and Level Company, New Britain, Conn. Circular plane	Sept. 25, 1877	758	223	12	531
195,481	Clark, Henry M., New Britain, Conn. Bench-plane	Sept. 25, 1877	759	224	12	531
	Clark, H. M. (*See* Almy, George F., assignor.)					
191,833	Clark, Issachar, Tippecanoe City, Ohio. Fruit-gatherer	June 12, 1877	320	99	11	1024
	Clark, James B. (*See* Clark, William N., J. B., and W. N., jr.)					
189,606	Clark, James B., jr., Vineland, N. J. Broom and brush rack	Apr. 17, 1877	613	190	11	655
195,482	Clark, James B., assignor of one-third interest to E. Hendricks, Ypsilanti, Mich. Sheet-metal roof	Sept. 25, 1877	760	224	12	531
189,696	Clark, James N., Cleveland, Ohio. Car-track clearer	Apr. 17, 1877	700	215	11	666
197,828	Clark, James W., Etna, Ohio. Gate	Dec. 4, 1877	122	38	12	963
187,100	Clark, John, Pontiac, Mich. Cheese former for cider-presses	Feb. 6, 1877	176	57	11	227
197,457	Clark, John, assignor to W. H. Osman, jr., Pontiac, Mich. Windmill	Nov. 27, 1877	779	232	12	899
	Clark, John A. (*See* Porter & Clark.)					
197,333	Clark, John K., Buffalo, N. Y. Butt-hinge	Nov. 20, 1877	641	189	12	869
	Clark, Josephus H. (*See* Cardot, Charles W., assignor.)					
197,720	Clark, Josiah P., Portland, Me. Exhaust mechanism for locomotive engines	Dec. 4, 1877	13	4	12	948
186,109	Clark, Julius G., Springfield, Mass., assignor to D. Dwight, jr., & Co. Machine for punching metallic lath	Jan. 9, 1877	295	89	11	56
	Clark, Leonidas F. (*See* Elliot & Clark.)					
194,030	Clark, Mary E., Wakefield, Mass. Corset	Aug. 14, 1877	250	74	12	275
187,511	Clark, Nathan, New York, N. Y. Dish-warmer	Feb. 20, 1877	606	188	11	302
186,799	Clark, Patrick J., and J. Kintz, West Meriden, Conn. Shade-holder for kerosene fixtures	Jan. 30, 1877	997	310	11	177
192,153	Same.....Lamp-shade roller	June 9, 1877	662	202	11	1080
193,438	Same.....Combined lamp-rest and shade-holder	July 24, 1877	921	280	12	161
	Clark, Philo M., *et al.* (*See* Cook, Isaac, assignor.)					
193,486	Clark, Richard D., and R. Wells, Baltimore, Md. Cooking-utensil	July 24, 1877	965	293	12	168
197,250	Clark, Samuel, Brooklyn, N. Y. Toy money-box	Nov. 20, 1877	255	164	12	856
	Clark, Spencer. (*See* Beal & Clark.)					
	Clark, Thomas C., *et al.* (*See* Bonzano, Adolphus, assignor.)					
198,080	Clark, Warren M., Waverly, N. Y. Breech-loading fire-arm	Dec. 11, 1877	372	116	12	1009
	Clark, Wheeler W. (*See* Smith, Ryder & Clark.)					
189,697	Clark, William, Newark, N. J. Machine for winding thread on spools	Apr. 17, 1877	700	215, 216	11	666
192,565	Clark, William, New York, N. Y. Tonsorial compound	July 3, 1877	9	11	12	14
197,602	Clark, William, Pittsburg, Pa. Cotton-bale tie	Nov. 27, 1877	927	276	12	920
	Clark, William A. (*See* Clark, Daniel J. and W. A.)					
187,964	Clark, William A., Westville, Conn. Lubricator	Mar. 6, 1877	8	2	11	382
190,197	Clark, William A., Jacksonville, Ga. Horse-detacher	May 1, 1877	84	24	11	757
194,956	Clark, William G., Chelsea, Mass. Traction-wheel	Sept. 11, 1877	211	66	12	437
	Clark, William H. (*See* Clark, William J. and W. H.)					
190,005	Clark, William H., Chicago, Ill. Hydraulic engine	Apr. 24, 1877	1035	316	11	718
191,314	Same.....Friction-clutch	May 29, 1877	1242	374	11	942
194,580	Clark, William H., Austin, Nev. Spring-floor	Aug. 28, 1877	827	246	12	368
192,152	Clark, William J. and W. H., Salem, Ohio. Fountain	June 19, 1877	660	202	11	1080
194,291	Clark, William N., J. B., and W. N., jr., Chester, Conn. Fire-escape	Aug. 21, 1877	534	162	12	319
	Clark, William S. (*See* Keats & Clark)	(Reissue.)				
197,763	Clarke, Almon, assignor to self and C. A. Spencer, Sheboygan, Wis. Book-support	Dec. 4, 1877	60	19	12	954
189,338	Clarke, Bernard J., New York, N. Y. Crayon for marking on glass	Apr. 10, 1877	337		11	610
	Clarke Combination Lock Company. (*See* Clarke, Henry, assignor.)					
	Clarke, Fisher M. (*See* Thompson & Parkhurst, assignors.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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190,826	Clarke, George B., Leonardville, N. Y. Plow	May 15, 1877	741	219	11	859
187,101	Clarke, Henry, Baltimore, Md. Combination-lock	Feb. 6, 1877	176	58	11	227
193,320	Clarke, Henry, assignor of one-half interest to T. Poultney, Baltimore, Md. Metallic seal	July 24, 1877	811	249	12	146
197,962	Clarke, Henry, assignor to Clarke Combination Lock Company, Baltimore, Md. Permutation-lock	Dec. 11, 1877	266	81, 82	12	992
192,682	Clarke, Jerome B., assignor of one-half interest to J. A. Bennett, Woonsocket, R. I. Stop-motion for drawing-frames	July 3, 1877	136	38	12	30
195,259	Clarke, Wiot H., and W. Collins, Council Grove, Kans. Washing-machine and churn combined	Sept. 18, 1877	537	156	12	491
190,742	Clarkson, Francis A., Black Brook, N. Y. Hoisting and conveying apparatus	May 15, 1877	669	198	11	848
194,221	Clarkson, Frank S., Baltimore County, assignor to R. Cromwell and F. B. Sloan, Baltimore, Md. Cutter-head for grooving and channeling	Aug. 14, 1877	449	136	12	301
186,800	Clarridge, John, Mount Sterling, Ohio. Cotton-seed planter	Jan. 30, 1877	997	310	11	177
186,802	Same.....Corn-planter	Jan. 30, 1877	999	310	11	177
	Clary, Stephen. (*See* Brown, Thomas H., jr., assignor.)					
186,110	Class, George C. A., Philadelphia, Pa. Piano-pedal attachment	Jan. 9, 1877	296	89	11	56
191,656	Class, William F., Cleveland, Ohio. Apparatus for pumping fluids from casks, &c	June 5, 1877	137	43	11	995
197,249	Class, William F., assignor to Worswick Manufacturing Company, Cleveland, Ohio. Faucet	Nov. 20, 1877	254	164	12	856
	Claudin, John E. (*See* Preisendanz, Gottlieb, assignor.)					
198,570	Clausen, Paul C., Milwaukee, Wis. Temporary binder	Dec. 25, 1877	891	272	12	1100
190,196	Clawson, Ira N., Philadelphia, Pa. Cigar-lighter	May 1, 1877	83	23	11	757
196,194	Clawson, J. Neal, Philadelphia, assignor to G. Selden, Erie, Pa. Cigar-lighter	Oct. 16, 1877	534	155	12	652
197,096	Clawson, Leonard E., San Francisco, Cal. Sectional chimney	Nov. 13, 1877	357	114	12	823
186,462	Clay, Cyrus C., Factoryville, Pa. Revolving chair	Jan. 23, 1877	674	206	11	124
188,857	Clay, Cyrus C., Factoryville, assignor to I. F. Tillinghast, La Plume, Pa. Combined tip-cup and drip-cup for umbrellas	Mar. 27, 1877	917	279	11	528
195,343	Claybrook, Frederick W., Hague, Va. Spool-holder	Sept. 18, 1877	612	180	12	502
193,077	Clayton, Cornelius C., Ocean Grove, N. J. Bathing-shoe	July 17, 1877	538	163	12	102
186,080	Clayton, Henry, assignor of one-half interest to J. S. Turner and B. Pickering, Dayton, Ohio. Feeding device for grain-drills	Jan. 9, 1877	268	81	10	53
194,649	Clayton, Herbert, Lexington, Ky. Hood for fire-places	Aug. 28, 1877	884	264	12	376
186,306	Clayton, James, Brooklyn, N. Y. Air-compressor	Jan. 16, 1877	484	149	11	88
193,143	Clearwater, Edwin F., Carmel, N. Y. Clothes-pin	July 17, 1877	609	184	12	111
	Cleary, John. (*See* Dillon & Cleary.)					
	Cleary, John. (*See* Dillon & Cleary) (Reissue.)					
	Cleveland, Timothy P. (*See* Green, Hoag & Cleveland.)					
191,931	Cleghorn, Hugh, Muskegon, Mich. Head-block for saw-mills	June 12, 1877	409	127	11	1035
196,957	Cleland, Robert, Bevington, Iowa. Wardrobe-bedstead	May 22, 1877	888	263	11	886
192,232	Clemens, Frederick M., Seymour, assignor of two-thirds interest to R. M. and T. S. Bassett, Birmingham, Conn. Die for shaping shovel-sockets	June 19, 1877	741	226	11	1091
	Clemens, George F., *et al.* (*See* Clemens, Gilbert H., assignor.)					
198,188	Clemens, Gilbert H., assignor of one-half interest to G. F. and H. N. Clemens, Springfield, Mass. Clamping-hub	Dec. 18, 1877	505	156	12	1034
	Clemens, Henry N., *et al.* (*See* Clemens, Gilbert H., assignor.)					
187,814	Clemens, Stillman A., deceased, by A. H. Chetlain, administrator, Chicago, Ill. Cotton-press	Feb. 27, 1877	917	284, 285	11	352
192,814	Clement, Benjamin F., assignor to C. H. Buck, Saint Louis, Mo. Stove-register	July 10, 1877	286	83	12	59
188,589	Clement, Simon F., Philadelphia, Pa. Clasp for pocket-books		633	195	11	481
187,815	Clements, Charles J., and E. P. Fowler, New York, N. Y. Spring-bed bottom	Feb. 27, 1877	920	285	11	352
	Clements, George S., *et al.* (*See* Cline, William H., assignor.)					
190,402	Clements, George S., assignor of two-thirds interest to S. I. Lovett and E. S. Field, Indianapolis, Ind. Street-car	May 1, 1877	290	85	11	784
197,334	Clements, George S., assignor of one-half interest to J. C. Decker, Lexington, Ohio. Burglar-alarm	Nov. 20, 1877	642	190	12	869
196,137	Clements, Wesley P., and J. H. Cagle, Davidson River, N. C. Hand-loom	Oct. 16, 1877	481	140	12	644
196,138	Cleminson, James, Westminster, England. Railway-truck	Oct. 16, 1877	482	140	12	644
194,222	Clemmons, Andrew J., Burdett, Mo. Wagon-tongue	Aug. 14, 1877	449	137	12	301
	Cleveland City Forge and Iron Company. (*See* Leonard, Franklin, assignor.) (Reissue.)					
195,260	Cleveland, Jehial H., and E. McConnell, assignors to selves, P. V. Carroll and S. A. Wall, Buffalo, N. Y. Combined snap-hook and buckle	Sept. 18, 1877	538	157	12	491
196,878	Cleveland, Jehial H., Buffalo, N. Y. Fluting-iron	Nov. 6, 1877	149	44	12	781
	Cleveland Non-Explosive Lamp Company. (*See* Carter, John W., assignor.)					
193,795	Cleveland, Orestes, Jersey City, N. J. Erasive tablet-holder	July 31, 1877	1299	390	12	223
186,543	Cleveland, Orlando, Middlesex, N. Y. Fence	Jan. 23, 1877	747	229	11	134
185,850	Cleveland, Squire R., Winneconne, Wis. Rotary engine	Jan. 2, 1877	36	11	11	13
193,111	Cleveland, William, Orange, N. J. Lining for faucets	July 17, 1877	583	176	12	107
194,332	Clevenger, Benjamin C., Chanute, Kans. Corn-stalk cutter	Aug. 21, 1877	577	173	12	325
190,608	Cliff, James, assignor of one-half interest to A. Harkness and J. S. Martin, Sandhurst, Colony of Victoria. Construction of disks for screwed stamper shanks	May 15, 1877	595	176	11	839
	Cliff, Walter. (*See* Cliff, William D. and W.)					
186,112	Cliff, William D. and W., Wortley, England. Manufacture of ornamental glazed bricks	Jan. 9, 1877	298		11	56
197,251	Clifford, Cassius R., Raysville, Ind. Grain-separator	Nov. 20, 1877	256	164	12	856
196,435	Clifford, Frank A., Saint Louis, Mo. Health-lift	Oct. 23, 1877	785	226	12	696
188,341	Clifford, Hiram, San Francisco, Cal. Milk-cooler	Mar. 13, 1877	382	120	11	438
	Clifford, H. L. (*See* Clifford, Walter, assignor.)					
	Clifford, James. (*See* Clifford, Thomas B. and J.) (Reissue.)					
191,933	Clifford, John, Cambridge, Mass. Composition for printers' inking-rolls	June 12, 1877	411		11	1036
191,934	Clifford, John, and J. Gielow, Chicago, Ill. Hose-nozzle	June 12, 1877	412	128	11	1036
191,932	Clifford, Martin, East Lemon, Pa. Wagon-brake	June 12, 1877	411	127	11	1035
7,645	Clifford, Thomas and J., Pittsburg, Pa. Clay and ore crusher (Reissue)	May 1, 1877	293	86	11	784
197,963	Clifford, Walter, Camp Baker, Mont., assignor to H. L. Clifford, Charlevoix, Mich. Portable stove and oven	Dec. 11, 1877	268	82	12	993
192,861	Climenson, William W., Saint Clair, Pa. Alarm for doors	July 10, 1877	331	98	12	65
194,650	Cline, George J., and J. Gallagher, Goshen, Ind. Churn	Aug. 28, 1877	884	264	12	376
197,335	Cline, John C., assignor of two-thirds interest to H. Wile, Philadelphia, and R. B. Seidel, Robeson Township, Pa. Machine for making plumbago crucibles	Nov. 20, 1877	643	190	12	869
194,893	Cline, William G., Cameron, Mo. Lifting-jack	Sept. 4, 1877	133	41	12	419
186,111	Cline, William H., Indianapolis, Ind., assignor of one-half interest to G. S. Clements and M. H. Mette. Alarm-lock	Jan. 9, 1877	297	89, 90	11	56
190,705	Clinedinst, Jacob, Gordonsville, Va. Reciprocating churn	May 15, 1877	631	188	11	814

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
190,419	Clingman, John, assignor of one-half interest to D. N. Kelley, and C. H. Ware, Dayton, Ohio. Float for carbureters	May 8, 1877	322	94	11	797
189,844	Cloke, William H., Rahway, N. J. Wash-bowl	Apr. 24, 1877	872	266	11	696
189,607	Clore, William, Rising Sun, Ind. Plow	Apr. 17, 1877	613	190	11	655
191,834	Closs, Jacob, Decatur, Ind. Stove-pipe drum	June 12, 1877	320	99	11	1024
192,112	Closson, William B., Boston, Mass. Art of making molds and their counterparts	June 19, 1877	614	187	11	1075
195,443	Same.....Producing electro-plate molds	Sept. 25, 1877	720	213	12	526
190,827	Closterman, Henry, jr., Cincinnati, Ohio. Folding-chair	May 15, 1877	741	220	11	859
193,925	Same.....same	Aug. 7, 1877	122	38	12	251
195,799	Same.....Folding rocking-chair	Oct. 2, 1877	104	31	12	576
186,712	Clotworthy, William P., assignor to Smith, Hanway & Co., Baltimore, Md. Flavoring-powder	Jan. 30, 1877	912		11	166
197,764	Cloudman, Frank A., Cumberland Mills, Me., assignor to S. D. Warren & Co., Boston, Mass. Rag-washing machine for paper-making	Dec. 4, 1877	61	20	12	954
187,255	Clough, George W., assignor to self and W. W. Davy, Cleveland, Ohio. Flue-cleaner	Feb. 13, 1877	337	107	11	260
188,283	Same.....Vapor-burner	Mar. 13, 1877	324	102	11	429
192,898	Clough, Joseph, Providence, R. I. Barber's chair	July 10, 1877	364	108	12	70
189,082	Clough, William, deceased, by W. V. Clough, administrator, Madison, Ind. Sugar-boiling and evaporating pan	Apr. 3, 1877	63	23	11	567
	Clough, William V., administrator. (*See* Clough, William.)					
195,803	Clous, William I., Reading, Pa. Washing-machine	Oct. 2, 1877	108	32	12	576
	Clouser, John. (*See* Houver, George, assignor.)					
194,131	Clow, George E., Seymour, Ind. Grain-cradle	Aug. 14, 1877	371	110	12	290
189,608	Clow, Henry A., Des Moines, assignor of one-half interest to R. A. Rheads, Newton, Iowa. Butter-worker	Apr. 17, 1877	613	190	11	655
7,878	Cluett, J. W. Alfred, Troy, N. Y. Cuff	Sept. 11, 1877	464	138	12	473
194,031	Same.....Collar	Aug. 14, 1877	251	74	12	276
198,276	Clum, Henry A., assignor to C. W. Rhodes; said Rhodes assignor of one-half interest to C. Godfrey, New York, N. Y. Illuminating apparatus	Dec. 18, 1877	605	183	12	1048
193,144	Clum, Henry W., Green Point, N. Y. Household-press	July 17, 1877	609	184	12	111
187,601	Clune, John F., assignor of one-half interest to E. Ettenheimer, New York, N. Y. Billiard-cue trimmer	Feb. 20, 1877	685	213	11	313
195,344	Clune, John F., assignor, by mesne assignments, to T. L. Butler, New York, N. Y. Curry-comb	Sept. 18, 1877	612	180	12	502
190,282	Cluxton, James R., Hillsborough, Ohio. Office-indicator	May 1, 1877	169	50	11	768
191,935	Same.....Sad-iron holder	June 12, 1877	413	128	11	1036
196,195	Cluxton, John A., Bentonville, Ohio. Post-hole digger	Oct. 16, 1877	535	155	12	652
	Coakley, Walter L. (*See* Lloyd & Coakley.)					
189,699	Coakley, Walter L., and S. W. Lloyd, Washington, D. C. Tooth-brush	Apr. 17, 1877	702	216	11	666
188,590	Coates, Amos W., Alliance, Ohio. Scissors	Mar. 20, 1877	634	196	11	482
189,923	Coates, John, Camden, Ohio. Bee-hive	Apr. 24, 1877	950	290, 291	11	707
192,154	Coates, John, Erie, Pa. Hydraulic engine	June 19, 1877	662	202	11	1080
188,591	Coates, William S., Charleston, S. C. Baling-press	Mar. 20, 1877	634	196	11	482
188,284	Coats, Andrew, New York, N. Y. Thread-cutting attachment	Mar. 13, 1877	326	102	11	430
	Coats, Chandler C. (*See* Afeldt, Frank W., assignor.)					
	Coats, Joseph H. (*See* Hackett & Coats.)					
189,700	Cobb, Amos J., Bucyrus, Ohio. Wind-wheel	Apr. 17, 1877	703	217	11	666
193,488	Cobb, Delphin B., Jersey City, N. J., assignor of one-half interest to Babcox & Wilcox, New York, N. Y. Heating apparatus for vacuum-pans	July 24, 1877	967	293	12	168
	Cobb, Henry B. (*See* Cobb, Zenas and H. B.)					
185,851	Cobb, Henry B., Wilmington, Del. Spring-seat	Jan. 2, 1877	37	11	11	13
195,483	Cobb, Judd M., Beloit, Wis. Building paper or board	Sept. 25, 1877	761		12	531
195,575	Cobb, Judd M., Beloit, Wis., and H. F. Evans, Chicago, Ill. Carpet-lining package	Sept. 25, 1877	845	251	12	544
194,511	Cobb, Zenas and H. B., Wilmington, Del. Door-spring	Aug. 28, 1877	766	227	12	359
188,592	Coburn, John J., Philadelphia, Pa. Lounge	Mar. 20, 1877	635	196	11	482
194,765	Coburn, Lemuel, Worcester, Mass. Device for oiling spindles in spinning-frames	Sept. 4, 1877	7	2	12	402
192,815	Coburn, William P., Winchester, N. H. Wooden box	July 10, 1877	287	84	12	59
190,828	Cochrane, Thomas A., and J. Hendy, San Francisco, Cal. Blowing-machine	May 15, 1877	742	220	11	859
192,567	Cochrane, Thomas A., San Francisco, Cal. Ore-stamp	July 3, 1877	11	4	12	14
	Cochran, Richard L. (*See* Smith & Cochran.)					
193,487	Cockcroft, John, assignor to D., D. L., and L. B. Goff, Pawtucket, R. I. Clasp for braid-rolls	July 24, 1877	966	293	12	168
	Cocke, W. M. (*See* Johnson, Franklin M., assignor.)					
187,749	Coddington, Frank J., and H. N. Kennedy, Plano, assignors to E. H. Gammon and W. Deering, Chicago, Ill. Harvester-reel	Feb. 27, 1877	848	264, 265	11	343
189,701	Coddington, Frank J., and H. N. Kennedy, Plano, Ill. Harvester-elevator	Apr. 17, 1877	704	217	11	667
193,692	Coddington, Lewis B., and W. W. French, Westfield, N. J. Harrow	July 31, 1877	1199	359	12	209
187,816	Coder, John F., Toledo, Ohio. Spring-bed bottom	Feb. 27, 1877	921	285	11	352
	Codman & Shurtleff. (*See* Cogswell, Thomas, assignor.)					
187,512	Coe, Edward, assignor to American Street-Lighting Company, New Haven, Conn. Gas-burner	Feb. 20, 1877	606	188	11	362, 363
	Coe, Lewis. (*See* Boughuer, Francis A., assignor.)					
189,366	Coes, Aury G., deceased; J. D. Lovell, administrator and assignor to J. H. and F. L. Coes, Worcester, Mass. Wrench	Apr. 10, 1877	361	116	11	614
	Coes, Fred. L., *et al.* (*See* Coes, Aury G.)					
	Coes, John H., *et al.* (*See* Coes, Aury G.)					
186,033	Coes, Loring, Worcester, Mass. Wrench	Jan. 9, 1877	225	67	11	47
186,034	Same.....same	Jan. 9, 1877	226	67	11	47
188,285	Same.....same	Mar. 13, 1877	326	103	11	430
193,321	Coffin, Isaac S., assignor of one-half interest to H. B. Fairbanks, Manchester, N. H. Can and carrier for milk	July 24, 1877	812	249	12	146
186,662	Coffits, John, Central City, Iowa. Gate	Jan. 30, 1877	867	268	11	159
194,581	Cofman, James G., Pierpont, Mich. Saw-feeder	Aug. 28, 1877	828	246	12	368
189,192	Cogger, William B., and F. T. June, Morris, Ill. School-desk	Apr. 3, 1877	158	55	11	580
187,817	Cogswell, Arthur B., Burlington, Vt. Folding-seat	Feb. 27, 1877	921	286	11	353
195,576	Same.....Folding-chair	Sept. 25, 1877	846	251	12	544
186,307	Cogswell, Thomas, assignor to Codman & Shurtleff, Boston, Mass. Cotton-holder for dental use	Jan. 16, 1877	485	149	11	88
	Cohansey Glass Manufacturing Company. (*See* Hipwell, Thomas, assignor.)					
	Cohen, Benjamin. (*See* Broadnax & Cohen.)					
195,345	Cohen, Joseph, Newark, N. J. Shawl, package, or book-strap handle	Sept. 18, 1877	613	180	12	502
190,006	Cohn, Abraham E., assignor of one-half interest to E. S. Simon, Philadelphia, Pa. Umbrella	Apr. 24, 1877	1036	316	11	718

Alphabetical list of patentees for the year 1877—Continued

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Cohn, Moritz. (*See* Henins, Max W., assignor.)					
7,596	Cohn, Moritz, New York, N. Y. Corset(Reissue)..	Apr. 10, 1877	536	167	11	636
188,778	Coil, Thomas G., Washington Court-House, Ohio. Ditching and tile-laying	Mar. 27, 1877	837	254	11	517
188,724	Colaban, Samuel, Cleveland, Ohio. Window-screen and awning	Mar. 27, 1877	774	237	11	509
	Colas, Jules. (*See* Roch & Colas.)					
	Colburn, Richard R. (*See* Arthur, Charles M., assignor.)					
	Same.....(*See* Curtis, Moseley, assignor.)					
	Same.....(*See* Curtis, Moseley S., assignor.)					
	Same.....(*See* McManus & Colburn.)					
198,450	Colby, Alstin G., assignor to self and E. C. Kinncar, Dover, N. H. Shoe	Dec. 25, 1877	781	237	12	1083
186,414	Colby, Charles T., Newburyport, Mass. Lamp-flame extinguisher	Jan. 23, 1877	628	191	11	118
187,820	Colby, Charles T., Newburyport, assignor to self and R. B. Hawley, Amesbury, Mass. Fulling-mill	Feb. 27, 1877	924	287	11	353
	Colby, Clarence L. (*See* Bowman, Franklin & Colby.)					
187,513	Colby, Ellery E., Groton, N. Y., assignor of one-half interest to O. Avery, jr., C. Bartholomew, and C. Perrigo. Bridge	Feb. 20, 1877	607	188	11	303
189,020	Colby, Ellery E., assignor of one-half interest to O. Avery, C. Bartholomew, and C. Perrigo, Groton, N. Y. Bridge-pier	Apr. 3, 1877	10	4	11	560
185,820	Colby, George A., New York, N. Y. Portable shelf	Jan. 2, 1877	7	3	11	10
187,818	Coldwell, Thomas, Newburg, N. Y. Lawn-mower	Feb. 27, 1877	922	286	11	353
194,333	Cole, Asa J., Peoria, Ill. Shutter-fastener	Aug. 21, 1877	578	173	12	325
190,283	Cole, Benjamin R., assignor of one-half interest to D. P. Dobbins, Buffalo, N. Y. Steering apparatus for canal-boats	May 1, 1877	170	50	11	768
193,597	Cole, Benjamin R., and S. B. King, Buffalo, N. Y. Towing canal-boats	July 31, 1877	1098	329	12	196
	Cole, David. (*See* Kelly & Cole.)					
187,514	Cole, David M., Elgin, Ill. Sash-fastener	Feb. 20, 1877	608	189	11	303
	Cole, E. H., *et al.* (*See* Dillen, Jonathan, assignor)... (Reissue.)					
194,990	Cole, George P., Johnstown, N. Y., assignor of one-half interest to E. W. Capron. Detergent compound	Sept. 11, 1877	245		12	441
185,852	Cole, Henry J., Wandsworth Road, England. Combined siphon tap and stopper for aerated liquid bottles	Jan. 2, 1877	38	12	11	13
185,853	Same.....Siphon tap and stopper for aerated liquid bottles	Jan. 2, 1877	39	12	11	14
196,335	Cole, Isaac I., Hillsdale, N. J. Basket	Oct. 23, 1877	695	200	12	683
	Cole, John C., *et al.* (*See* Randel, William, assignor.)					
	Cole, John W., *et al.* (*See* Eaton, James W., assignor.)					
	Cole, Josiah. (*See* James, John T., assignor.)					
194,582	Cole, Luther, Corinth, N. Y. Apparatus for stretching felt-jackets for rollers in paper-machines	Aug. 28, 1877	829	246	12	368
197,458	Cole, Oscar M., Portland, Mich. Car-coupling	Nov. 27, 1877	779	232	12	899
	Cole, Spencer H. (*See* Woodbury & Cole.)					
188,502	Cole, Thomas A., Trafalgar, Ind. Corn-row marker	Mar. 20, 1877	553	171	11	470
186,113	Cole, Thomas Z., assignor of one-fourth interest to J. E. Walton, Newark, Del. Dredging-machine	Jan. 9, 1877	298	90	11	56
187,965	Coleman, Ambrose B., Lyndonville, N. Y. Plow-harness for horses	Mar. 6, 1877	10	3	11	382
191,315	Coleman, Charles C., Honolulu, Hawaii. Screw-thread counter	May 29, 1877	1242	374	11	942
187,599	Coleman, Charles S., assignor of one-half interest to T. F. Coleman, Allegheny, Pa. Cotton tie	Feb. 20, 1877	683	212	11	313
188,593	Coleman, Frank A., Newport, Ky. Sofa-bedstead	Mar. 20, 1877	636	196	11	482
197,604	Coleman, George W., Kalamazoo, Mich. Hydro-carbon burner	Nov. 27, 1877	928	277	12	920
190,743	Coleman, Henry S., Chelmsford, England. Circulating device for steam-boilers	May 15, 1877	671	199	11	849
193,848	Same.....Steam-boiler	Aug. 7, 1877	47	15	12	241
191,406	Coleman, John T., Baltimore, Md. Oil-still	May 29, 1877	1319	400	11	953
	Coleman, Theodore F. (*See* Coleman, Charles S., assignor.)					
189,339	Coleman, William H., Salisbury Mills, N. Y. Ice-ax	Apr. 10, 1877	337	108	11	610
186,415	Coler, Elijah J., Dayton, Ohio. Automatic gate	Jan. 23, 1877	628	191	11	118
	Coles, David B. (*See* Coles, James, assignor.)					
198,571	Coles, Herbert Z., Courtland, Ohio. Oatmeal cutter	Dec. 25, 1877	891	272	12	1100
193,225	Coles, James, Milburn, assignor of one-half interest to D. B. Coles, Mount Olive, N. J. Weeding-plow	July 17, 1877	692	211	12	122
195,346	Colford, Henry, Halifax, Canada. Spark-arrester	Sept. 18, 1877	613	181	12	502
191,657	Colin, Louis B., Jersey Heights, N. J. Clasp-button	June 5, 1877	138	43	11	995
	Colket, George H. (*See* Fergus, James, assignor.)					
	Coll, Bernard. (*See* Miller & Coll.)					
192,899	Collard, Richard M., New York, N. Y. Pen and pencil case	July 10, 1877	365	108	12	70
	Collender, Hugh W. (*See* Maynadier, James E., assignor.)					
190,285	Same.....New York, N. Y. billiard-chalk cup	May 1, 1877	171	51	11	768
193,751	Same.....Fastening device for billiard-cushion rails	July 31, 1877	1248	375	12	217
190,284	Coller, Lewis, Flint, Mich. Broadcast sower	May 1, 1877	170	50, 51	11	768
189,193	Collet, John W., Upper Alton, Ill. Governor	Apr. 3, 1877	159	55	11	580
187,106	Collett, William H., Jackson, Tenn. Colter-plow	Feb. 6, 1877	181	59	11	227
197,605	Collian, Victor, Detroit, Mich. Cupola-furnace	Nov. 27, 1877	930	277	12	920
196,631	Collie, William H., and E. Deady, San Francisco, Cal. Sewer-trap	Oct. 30, 1877	996	290	12	737
194,991	Collier, Frederick M., and C. Thomas, Boston, Mass. Trace for harness	Sept. 11, 1877	245	74	12	441
189,194	Collier, Orrin, assignor of one-half interest to G. W. Gilbert, Sacramento, Cal. Automatic check-valve	Apr. 3, 1877	160	56	11	580
196,742	Collignon, Frank, Buffalo, N. Y. Lubricator	Nov. 6, 1877	5	2	12	761
	Collins, Benjamin. (*See* Sweeney, Peter, assignor.)					
192,739	Collins, Charles, New Orleans, La. Plate-oil or varnish for printing-inks	July 3, 1877	179		12	37
187,819	Collins, Charles H., assignor to self and F. Deshon, Lynn, Mass. Lasting-jack	Feb. 27, 1877	923	286	11	353
	Collins Company. (*See* Blair, Charles, assignor.)					
	Same.....(*See* Chapman, Luke, assignor.)					
	Same.....(*See* Sears, Edward H., assignor.)					
193,396	Collins, Cornelius, Albia, Iowa. Artificial leg	July 24, 1877	882	270	12	156
	Collins, E. A., *et al.* *See* Lewars, John H., assignor.)					
	Collins, Elwood A., *et al.* (*See* McCarty, David, assignor.)					
	Collins, Enos. (*See* Pumpelly & Collins.)					
187,600	Collins, George, Fort Wayne, Mich. Tool holder	Feb. 20, 1877	684	213	11	313
195,577	Collins, George, Springwells, Mich. Refrigerator	Sept. 25, 1877	847	252	12	544
187,705	Collins, George G., Philo, Ill. Earth-auger	Feb. 27, 1877	808	251	11	338
188,103	Collins, George L., and G. Gascoigne, Chambersburg, N. J. Dumping-wagon	Mar. 6, 1877	135	40	11	399
189,083	Collins, Hiram, Amesbury, Mass. Safety attachment for traveling-bags	April 3, 1777	64	24	11	568
	Collins, Hiram B. (*See* Jones, Preston, assignor.)					
186,198	Collins, Jairus, and J. D. Saltsgaver, Fairview, Ohio. Curtain-fixture	Jan. 16, 1877	392	119	11	76
191,835	Collins, James W., Laramie City, Wyo. Chair-brace	June 12, 1877	321	99	11	1021

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
186,081	Collins, John W., Washington, D. C. Hot-air register	Jan. 9, 1877	269	81	11	53
193,145	Collins, John W., Chicago, Ill. Pump	July 17, 1877	610	185	12	111
190,554	Collins, Joseph, Reynoldsville, Pa. Machine for clamping and squaring sashes	May 8, 1877	856	135	11	813
192,636	Collins, J. T., and E. B. Grant, Byesville, Ohio. Nut-lock	July 3, 1877	82	2	12	23
191,029	Collins, Michael H., East Medway, Mass. Musical instrument	May 22, 1877	960	285	11	895
188,104	Collins, Nicholas H., Rayville, La. Baling-press	Mar. 6, 1877	135	40	11	399
	Collins, William. (*See* Clarke & Collins.)					
192,683	Collins, William, Perham, Minn. Saw-guide	July 3, 1877	137	38	12	31
194,651	Collins, William A., Bloomfield, N. J. Dredging-bucket	Aug. 28, 1877	885	264	12	377
194,294	Collins, William G., Cleveland, Ohio. Wagon-brake lever	Aug. 21, 1877	537	162	12	320
194,295	Same. End-gate rod for vehicles	Aug. 21, 1877	538	163	12	320
195,484	Collis, Robert O., Cincinnati, Ohio. Bed-bottom and fire-escape	Sept. 25, 1877	761	224	12	531
197,606	Collman, John and J., jr., Cedar Rapids, Iowa. Nut-lock	Nov. 27, 1877	931	277	12	921
190,468	Colman, Edward L., Vandalia, Mo. Car-axle box	May 8, 1877	373	108	11	803
186,114	Collum, George S., assignor of one-half interest to W. A. Bryant, Hartford, Conn. Machine for making caramels and other candies	Jan. 9, 1877	299	90	11	57
197,017	Colmer, George, Sprinfield, La. Dose-measure	Nov. 13, 1877	296	87	12	810
189,702	Colson, Henry W. P., Buffalo, N. Y. Lamp-lighter	Apr. 17, 1877	705	217	11	667
	Colt, James B. (*See* Smith, Albert M., assignor.)					
188,004	Colt, Joseph R., Lyndonville, N. Y. Cultivator-tooth	Mar. 6, 1877	47	13	11	387
197,829	Colton, Morgan, Woodstock, Ill. Horseshoe-calk sharpener	Dec. 4, 1877	124	38	12	963
196,519	Columbus, Dana L, Chicago, Ill. Scale-beam	Oct. 30, 1877	892	257	12	721
193,752	Colvin, Orson, Vicksburg, assignor of one-half interest to J. R. Hawkins, Kalamazoo, Mich. Bee-hive	July 31, 1877	1249	375, 376	12	217
	Colwell, A. B., *et al.* (*See* Rittenberry, John W., assignor.)					
	Colwell, William S. (*See* Dickson, Henry, assignor.)					
187,217	Colwell, William S., Pittsburg, Pa. Brick-kiln	Feb. 13, 1877	300	98	11	255
187,515	Same. same	Feb. 20, 1877	609	189	11	303
195,703	Comada, George, Baltimore, Md. Animal-trap	Oct. 2, 1877	12	4	12	562
195,704	Same. same	Oct. 2, 1877	13	4	12	562
	Combined Patents Can Company. (*See* Miller, Herman, assignor) (Reissue.)					
190,555	Combs, John H., Stamford, assignor of one-half interest to B. A. Treat, Naugatuck, Conn. Carriage king-bolt	May 8, 1877	856	135	11	814
192,816	Comey, Willard, Westborough, Mass. Grinder for harvester-knives	July 10, 1877	288	84	12	59
191,516	Comings, William R., New Britain, Conn. Telescopic or hydraulic elevator	June 5, 1877	6	2	11	977
192,637	Same. Applying power in steam, air, or gas engines	July 3, 1877	83	25	12	23
7,584	Comly, John, Williamsburg, N. Y. Manufacture of gear-wheels (Reissue)	April 3, 1877	270	88, 89	11	594
186,109	Compes, Henry, San Francisco, Cal. Sofa bedstead	Jan. 16, 1877	393	120	11	76
190,556	Same. same	May 8, 1877	457	135	11	814
	Compton, John C. (*See* Hall, David E., assignor.)					
188,595	Comstock, Austin W., and James W. Hampton, Mount Pleasant, Iowa. Tire-tightener and lifting-jack	Mar. 20, 1877	637	197	11	482
196,877	Comstock, Austin W., Mount Pleasant, Iowa. Tire-bending and upsetting attachment for punching and shearing machines	Nov. 6, 1877	148	44	12	781
194,766	Comstock, Chester, New Canaan, Conn. Metallic roofing-shingle	Sept. 4, 1877	9	3	12	402
189,302	Comstock, George R., Mankato, Minn. Windmill	Apr. 10, 1877	298	95	11	605
188,594	Comstock, Henry W., La Fayette, Ind. Suppository mold	Mar. 20, 1877	636	197	11	483
186,803	Conaway, William A., Caledonia, Ohio. Plow-point	Jan. 30, 1877	1000	311	11	177, 178
197,204	Concannon, Washington, and W. F. Drago, Valparaiso, Ind. Combined roller and harrow	Nov. 20, 1877	511	150	12	850
190,557	Conderman, Caleb, Hornellsville, N. Y. Step for platform-wagons	May 8, 1877	458	135	11	814
191,030	Same. Platform-wagon step	May 22, 1877	961	285	11	895
197,964	Same. Rein-holder	Dec. 11, 1877	269	82	12	993
194,223	Condict, Nathan W., jr., Jersey City, N. J. Valve mechanism for pumping-engines	Aug. 14, 1877	450	137	12	301
	Condit, Frederic, *et al.* (*See* Heaton, William, assignor.)					
	Condon, John W. (*See* Solter, John, assigoor.)					
195,801	Condry, William, and M. Quinn, Providence, R. I. Boot-cleaner	Oct. 2, 1877	106	31	12	576
	Cone, Jonathan. (*See* Bloomsburg, Peter, assignor.)					
194,805	Cone, Nelson W., Delaware, Ohio. Churn	Sept. 4, 1877	52	17	12	407
193,640	Conger, Hiram N., Hot Springs, Ark. Ticket-case	July 31, 1877	1147	343	12	202
194,583	Congdon, Isaac H., Omaha, Nebr. Piston-packing	Aug. 28, 1877	829	246	12	368
	Coning, William. (*See* Banks & Coning.)					
193,807	Conkey, Jason A., assignor to self and E. R. Flint, Newton, Mass. Horseshoe	Aug. 7, 1877	11	4	12	236
191,278	Conklin, ohn E., Seneca Falls, N. Y. Toy velocipede	May 29, 1877	1212	364	11	938
190,198	Conklin, Joseph I., jr., New York, assignor to self and C. A. Dresser, Brooklyn, N. Y. Electric station-indicator for railways	May 1, 1877	85	24	11	757
191,836	Same. Electrical railway-signal	June 12, 1877	321	100	11	1024
198,572	Same. Circuit closer for railway-signals	Dec. 25, 1877	892	272	12	1100
	Conkling, Stoddard H., *et al.* (*See* Shoots, James D., assignor.)					
198,489	Conlan, James, Kendall Creek, Pa. Packed casing-head for oil-wells	Dec. 25, 1877	820	248	12	1089
	Conlogue, John W. (*See* Candee, Charles E., assignor.)					
190,558	Conn, Charles G., Elkhart, Ind. Mouth-piece for musical instruments	May 8, 1877	458	136	11	814
191,031	Connell, John H., Kanawha Court-House, W. Va. Water-meter	May 22, 1877	962	285	11	895
186,416	Connell, John P., Kensington, Conn. Door-bell	Jan. 23, 1877	629	192	11	118
196,075	Connell, Robert A., Washington, D. C. Paper-folding machine	Oct. 16, 1877	409	119	12	635
196,562	Connelly, Joseph H., New Brighton, Pa. Generating carbonic-acid gas in fire-extinguishers	Oct. 30, 1877	935		12	728
196,632	Same. Fire-extinguishing apparatus	Oct. 30, 1877	997	291	12	737
194,073	Connelly, Thomas, and J. F. Bickell, Chelsea, Mass. Curtain-fixture	Aug. 14, 1877	292	87	12	281
197,097	Same. Automatic swing	Nov. 13, 1877	388	114	12	823
196,563	Connelly, Thomas E., New Brighton, Pa. Fire-extinguisher	Oct. 30, 1877	936	271	12	728
	Conner, Riley. (*See* Gleichman, John M., assignor.)					
195,984	Conner, William, assignor of one-half interest to A. O. Denio, Wilmington, Del. Steam-trap	Oct. 9, 1877	308	86	12	612
190,286	Connolly, John T., New York, N. Y. Pipe and cigar holder	May 1, 1877	173	51	11	708
192,618	Connor, Benjamin H., Cincinnati, Ohio. Stand for fire-irons	July 3, 1877	65	19	12	21
191,316	Conover, George M., assignor of one-half interest to G. R. Tuttle, Cleveland, Ohio. Device for preventing back-motion of sewing-machines	May 29, 1877	1243	374	11	942
195,347	Same. Miter-box	Sept. 18, 1877	614	181	12	502
195,985	Conover, Jacob A., New York, N. Y. Fire-kindler	Oct. 9, 1877	309	86	12	612
191,936	Conrad, James M., Cuba, N. Y. Machine for removing bugs from potato-vines	June 12, 1877	414	128	11	1036
	Conrad, Osborn. (*See* Smith, Hiram B., assignor.)					
	Same. (*See* Stratton, James, assigoor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
195,802	Converse, Bolivar C., assignor of one-half interest to P. B. Martin. Vehicle dash-rail	Oct. 2, 1877	107	31	12	576
7,506	Converse, Charles C., Brooklyn, N. Y., assignor, by mesne assignments, to J. Densmore. Apparatus for heating cars and other vehicles (Reissue)	Feb. 13, 1877	540	165	11	286
	Converse, John H., *et al.* (*See* Longstreth, Edward, assignor.)					
	Converse, Julius, *et al.* (*See* Capron, Ariel B., assignor.)					
189,609	Converse, Susan T., Woburn, Mass. Under-garment	Apr. 17, 1877	615	190	11	655
197,765	Conway, John A., Toledo, Ohio. Flower-pot	Dec. 4, 1877	62	20	12	955
	Conway, Thomas G. (*See* Ralph, Frank, assignor.)					
192,976	Conway, William B., assignor of one-half interest to G. D. Thomas, Blacksburg, Va. Safety-stirrup	July 10, 1877	436	131	12	80
	Conwell, Jesse L. (*See* Moore, Aron F., assignor.)					
	Cook, Adam. (*See* Schindler & Gerdom, assignors) (Reissue.)					
	Cook, Benjamin L. (*See* Naylor, Kinzey C., assignor) (Reissue.)					
	Cook, Charles M. (*See* Long, Oliver, assignor.)					
	Cook, Edward E. (*See* Duncan, Joseph S., assignor.)					
	Cook, Elbert P. (*See* Hall & Cook.)					
188,725	Cook, Frederic, New Orleans, La. Bale-tie	Mar. 27, 1877	775	238	11	509
	Cook, Fredrick. (*See* Mack & Cook.)					
	Cook, George W. (*See* Burtnett & Cook.)					
	Same (*See* Hense, Charles, assignor.)					
	Same (*See* Schaffer, Charles, assignor.)					
191,032	Cook, George W., Chicago, Ill. Pneumatic lamp	May 22, 1877	963	286	11	895
	Cook, Harry I. (*See* States & Cook.)					
197,098	Cook, Horatio N., San Francisco, Cal. Leather-splitting machine	Nov. 13, 1877	389	114	12	824
196,196	Cook, Isaac, assignor of two-thirds interest to P. M. Clark and B. R. Lippincott., Saint Louis, Mo. Gas-regulator	Oct. 16, 1877	536	155	12	652
196,879	Cook, James, Brooklyn, N. Y. Screw-tap	Nov. 6, 1877	150	45	12	781
187,966	Cook, Josiah D., Toledo, Ohio. Artificial filtration	Mar. 6, 1877	10	3	11	382
190,706	Cook, Luther C., Ottumwa, Iowa. Blower and smoke-consumer for furnaces	May 15, 1877	632	188	11	844
189,924	Cook, Michael, West Le Roy, Mich. Pump	Apr. 24, 1877	951	291	11	707
188,858	Cook, Porter, and J. G. Jones, Baltimore, Md. Furnace for heating soldering-irons	Mar. 27, 1877	918	279	11	528
7,478	Cook, Roswell F., Ilion, N. Y. Breech-loading fire-arm (Reissue)	Jan. 30, 1877	1119	346	11	192
195,485	Cook, Samuel, Bury, England. Weft-fork for looms	Sept. 25, 1877	762	224	12	532
	Cook, Simeon S. (*See* Stafford & Cook.)					
192,233	Cook, Thomas, Philadelphia, Pa. Ice and refrigerating machine	June 19, 1877	742	226	11	1091
192,234	Same same	June 19, 1877	743	226, 227	11	1091
194,075	Cook, Thomas, R., Mooresville, Ind. Draft-equalizer	Aug. 14, 1877	294	88	12	281
	Cook, Thomas W. G. (*See* Demorest & Cook.)					
193,146	Cook, William H., New York, N. Y. Memorandum-book	July 17, 1877	611	185	12	111
	Cook, William T. (*See* Scrymgeour, David, assignor.)					
198,189	Cooke, Albert D., Easton, Pa. Bed-bottom	Dec. 18, 1877	506	157	12	1034
194,032	Cooke, Alfred E., assigner to C. Rogge, Baltimore, Md. Clothes-wringer	Aug. 14, 1877	252	75	12	276
7,690	Cooke, Charles L., assignor of one-half interest to W. V. Kish, Buffalo, N. Y. Railway-switch (Reissue)	May 22, 1877	1139	342	11	920
197,099	Same Railway-frog	Nov. 13, 1877	390	115	12	824
185,854	Cooke, David W., Franklin, Tenn. Towing canal-boats	Jan. 2, 1877	40	12	11	14
194,074	Cooke, Ella C., Washington, D. C. Shield and damper for fire-place grates	Aug. 14, 1877	293	87	12	281
195,486	Cooke, George E., Rossville, Kans. Adjustable harrow, ground-marker, and corn-cultivator	Sept. 25, 1877	763	225	12	532
193,849	Cookerly, Charles E., assignor to W. Farnsworth, South Pueblo, Colo. Trussed wagon-axle	Aug. 7, 1877	48	16	12	241
	Cookson, John C. (*See* Orff, Cookson & Rastetter.)					
191,938	Cookson, John C., and L. Rastetter, assignor to J. Orff, Fort Wayne, Ind. Millstone-dressing machine	June 12, 1877	418	129	11	1036
193,850	Cooley, Charles A., East Hartford, Conn. Stop for engine-lathes	Aug. 7, 1877	49	16	12	241
186,413	Cooley, Orville, assignor to Johnston Harvester Company, Brockport, N. Y. Harvester-rake	Jan. 23, 1877	626	191	11	118
191,116	Same Pitman	May 22, 1877	1039	511	11	906
195,092	Same Rake-elbow for harvesters	Sept. 11, 1877	351	106	12	456
198,354	Cooley, Orville, Brockport, N. Y. Shaft-hanger	Dec. 18, 1877	671	204	12	1058
187,516	Cooley, William, Waterbury, Conn. Obtaining cream from milk	Feb. 20, 1877	610	189	11	303
196,970	Cooley, William T., Chicago, Ill. Carriage dash-frame	Nov. 13, 1877	252	75	12	804
191,517	Coombs, John C., Boston, Mass. Combined calendar and washing-list	June 5, 1877	8	2	11	977
194,549	Coombs, John H., Boston, Mass. Piston water-meter	Aug. 28, 1877	800	238	12	464
188,596	Cooney, Patrick H., Erie, Pa. Washing-machine	Mar. 20, 1877	638	197	11	482
	Coonley, John C. (*See* Ewart & Coonley.)					
190,007	Coonley, John C., Chicago, Ill. Whiffletree hook and clip	Apr. 24, 1877	1037	316	11	718
190,008	Same same	Apr. 24, 1877	1038	316	11	718
190,009	Same Tumbling-barrel	Apr. 24, 1877	1039	317	11	718
189,021	Coonley, John C., and A. O. Buckius, Chicago, Ill. Clevis	Apr. 3, 1877	11	4	11	560
186,667	Coonrad, Daniel S., Rockford, Ill., assignor to self and J. H. Davis, Marshalltown, Iowa. Line-fastener	Jan. 30, 1877	871	269	11	160
186,804	Coons, Freeman, Hudson, N. Y., and E. Van Winkle, Atlanta, Ga. Cotton-gin feeder	Jan. 30, 1877	1001	311	11	178
	Cooper, Albert. (*See* Hickok & Cooper.)					
187,967	Cooper, Almond F., Cambridge, Mass. Car-wheel	Mar. 6, 1877	11	3	11	382
	Cooper, Benjamin, *et al.* (*See* Henry, Benjamin F., assignor.)					
	Cooper, Charles. (*See* Tiffany, Eli, assignor.)					
197,100	Cooper, Charles J., Oxford, Ala. Double-winged cultivator	Nov. 13, 1877	391	115	12	824
197,336	Cooper, George, assignor to H. E. Cady, Brooklyn, N. Y. Game-table	Nov. 20, 1877	643	190	12	869
192,113	Cooper, James R., Oakland County, Michigan. Feathering or comminuting copper or other metals	June 19, 1877	615	188	11	1075
192,114	Same Casting brass and other metals	June 19, 1877	617	188	11	1075
	Cooper, Jeremiah S., *et al.* (*See* Starkey, William, assignor.)					
197,998	Cooper, John, Boston, Mass. Regulator for gas-burners	Dec. 11, 1877	299	91	12	998
	Cooper, Joseph T., *et al.* (*See* Henry, Benjamin F., assignor.)					
	Cooper, Joshua. (*See* Stiveson, Anthony O., assignor.)					
	Cooper, Peter. (*See* Rogers, Thomas B., jr., assignor.)					
196,743	Cooper, Sarah, Morrisonville, Pa. Apple quartering and coring machine	Nov. 6, 1877	6	2	12	761
189,428	Cooper, William, Ypsilanti, Mich. Chain-pump bucket	Apr. 10, 1877	423	133	11	621
191,225	Cope, Ezra, Hamilton, Ohio. Water-tube boiler	May 29, 1877	1163	349	11	932
191,226	Same Steam-valve	May 29, 1877	1164	349	11	932
187,102	Cope, John C., Price's Branch, Mo. Car-coupling	Feb. 6, 1877	178	58	11	227

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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197,337	Cope, Thomas, J., Philadelphia, Pa. Sled	Nov. 20, 1877	644	190	12	870
	Copeland, Ann E., *et al.* (*See* Copeland, Robert A., assignor.)					
196,633	Copeland, David W., Theresa, N. Y. Horseshoe	Oct. 30, 1877	999	291	12	737
198,573	Same..... Carriage-curtain	Dec. 25, 1877	893	272	12	1100
197,101	Same..... Thill-coupling	Nov. 13, 1877	392	115	12	824
195,578	Copeland, George T., Brattleborough, Vt. Fishing-line reel	Sept. 25, 1877	848	252	12	544
186,663	Copeland, George W., Malden, Mass. Tack strip and reel	Jan. 30, 1877	868	268	11	159
191,937	Copeland, George W., Malden, E. Woodward and M. Brock, Boston, Mass., assignors to said Copeland. Lasting-machine for boots and shoes	June 12, 1877	414	128 129	11	1036
197,607	Copeland, George W., Malden, E. Woodward and M. Brock, Boston, Mass., assignors to Copeland Lasting-Machine Company. Lasting-machine for boots and shoes	Nov. 27, 1877	932	278	12	921
197,608	Copeland, George W., Malden, E. Woodward and M. Brock, Boston, Mass., assignors to said Copeland. Tacking-machine	Nov. 27, 1877	935	278	12	921
197,609	Copeland, George W., Malden, and M. Brock, Boston, Mass., assignors to said Copeland. Tack-holding strip	Nov. 27, 1877	937	278	12	921
197,610	Copeland, George W., Malden, assignor to Copeland Lasting-Machine Company, Boston, Mass. Lasting apparatus	Nov. 27, 1877	937	279	12	921
	Copeland Lasting-Machine Company. (*See* Copeland, George W., ass.goor.)					
	Same.....(*See* Copeland, Woodward & Brock, assignors.)					
188,234	Copeland, Robert A, assignor to A. E. Copeland and A. Walther, Bay City, Mich. Fire-escape	Mar. 13, 1877	281	88	11	424
195,986	Copland, Peter, assignor of one-half interest to J. W. Wolf, Johnstown, Ohio. Carriage-top	Oct. 9, 1877	309	87	12	612
189,084	Copp, Monroe M., Rochester, N. Y. Combined cane and umbrella	Apr. 3, 1877	65	24	11	568
192,486	Coppel, Jacob F., assignor to self and C. H. Leng, Havana, Ill. Oil-can	June 26, 1877	1014	307	11	1139
197,830	Coppock, Irvin, Carthage, Mo Water-elevator bucket	Dec. 4, 1877	124	38	11	963
187,517	Coppuck, Malcolm M., and S. L. Wiegand, Philadelphia, Pa. Car-coupling	Feb. 20, 1877	612	189	11	303
189,845	Corbett, Edward, Boston, assignor of one-half interest to J. E. Wheeler, Lynn, Mass. Machine for crimping boot and shoe uppers	Apr. 24, 1877	872	266	11	696
191,837	Corbett, Edward, and F. W. Coy, Boston, and J. E. Wheeler, Lynn, Mass. Machine for folding and crimping leather	June 12, 1877	322	100	11	1024
192,568	Corbett, Edward, and C. F. Harlow, Boston, Mass.; said Harlow assignor to said Corbett. Seam stay-guide for sewing-machines	July 3, 1877	12	4	12	14
188,597	Corbett, Joseph, Hartford, Conn., assignor to Railway Register Manufacturing Company. Alarm and registering apparatus	Mar. 20, 1877	639	197	11	482
198,277	Corbett, Samuel J., Los Angeles, Cal. Removing and destroying sewer-gases	Dec. 18, 1877	606	183	12	1049
	Corbin, Elbert A. (*See* Schmalz, Louis E., assignor.)					
	Corbin, F., *et al.* (*See* Smith, Charles H., assignor.)					
	Same.....(*See* Sparks, William E., assignor.)					
	Same.....(*See* Spring, John M., assignor.)					
	Same.....(*See* Summers, Lucius P., assignor.)					
197,545	Corbin, Jay S., Gouverneur, N. Y. Wheel-harrow	Nov. 27, 1877	870	259	12	912
194,862	Corbin, John F., and M. W. Moseley, Eagle Bridge, N. Y. Potato-bug catcher	Sept. 4, 1877	106	33	12	415
	Corbin, P., *et al.* (*See* Sparks, William E., assignor.)					
	Same.....(*See* Spring, John M., assignor.)					
	Same.....(*See* Summers, Lucius P., assignor.)					
194,652	Corbin, Richard B., Yates City, Ill. Hog-trap	Aug. 28, 1877	886	264	12	377
195,487	Corell, Abram O., Brocton, N. Y. Fence	Sept. 25, 1877	764	225	12	532
196,744	Coreth, Rudolph, assignor to O. C. Meusebach, Belleville, Ill. Plow	Nov. 6, 1877	7	2	12	761
	Corey, James W. (*See* Flanagan, Francis P., assignor)	(Reissue.)				
194,413	Corley, John E., Louisville, Tenn. Combined cooking-stove and heater	Aug. 21, 1877	652	196	12	335
185,855	Corliss, George H., Providence, R. I. Valve-connection	Jan. 2, 1877	40	12	11	14
190,469	Same.....Pump-valve	May 8, 1877	374	108	11	803
190,470	Same.....Gear-cutting machine	May 8, 1877	375	109	11	803
190,958	Same Air-pump connection for steam-engines	May 22, 1877	889	263	11	886
	Corliss, Varnum. (*See* Sanborn, John C., assignor.)					
197,459	Corman, Charles A., Cochituate, Mass. Wrench	Nov. 27, 1877	780	233	12	899
198,081	Corneil, James C., Lowder, Ill. Hub-boring machine	Dec. 11, 1877	373	117	12	1009
187,357	Cornelis, Edward, assignor to self and J. M. Elliott, New York, N. Y. Apparatus for the manufacture of mineral waters	Feb. 13, 1877	442	138	11	274
	Cornelius & Co. (*See* Brown, John L., assignor.)					
196,139	Cornelius, Aaron M., Oregon City, Oreg. Washing-machine	Oct. 16, 1877	484	140	12	645
188,342	Cornell, George E., East Saginaw, Mich., assignor to S. V. Parsons, Buffalo, N. Y. Gate.	Mar. 13, 1877	383	120	11	438
194,414	Cornell, George W., Jersey City, N. J. Refrigerating-chambers	Aug. 21, 1877	653	196	12	335
197,721	Cornell, George W., assignor of two-thirds interest to D. F. Riegle and D. Sharrer, Clarence Centre, N. Y. Screw-fastening for joints	Dec. 4, 1877	14	4	12	948
192,740	Cornell, Leffert R., Shelter Island, assignor of one-half interest to H. R. Dixon, Castleton, N. Y. Process and apparatus for drying fish-scraps	July 3, 1877	179	52	12	37
196,634	Cornell, Mark H., Bridgewater, Mass. Paper-machine	Oct. 30, 1877	999	291	12	737
197,338	Cornell, Peter O., Binghamton, Wis. Fence-post	Nov. 20, 1877	645	191	12	870
	Cornell, Sidney, *et al.* (*See* Strong, Myron H., assignor.)					
195,348	Corning, Cyrus, assignor of one-half interest to A. J. Reid, Lawrence, Kans. School-chart.	Sept. 18, 1877	616	182	12	503
193,588	Corning, Cyrus, and A. J. Reid, Lawrence, Kans. Fire and burglar alarm	July 24, 1877	1070	321	12	180
	Corning Glass Works. (*See* Butterworth, William, assignor.)					
	Corning, Nathaniel, *et al.* (*See* Esty, William, assignor.)					
191,407	Cornish, Benjamin F., assignor of one-half interest to J. L. Power, French Camp, Miss. Road-engine	May 29, 1877	1320	400	11	953
186,544	Cornish, Harry B., and C. P. Hunt, River Falls, Wis. Horseshoe	Jan. 23, 1877	747	229	11	134
190,707	Cornish, Oscar S., and D. W. Curtis, Fort Atkinson, Wis. Butter-worker	May 15, 1877	633	188	11	844
	Cornthwait, Edward. (*See* Shear, Henry, assignor.)					
197,102	Cornwall, George, Garden City, N. Y. Vehicle-wheel tire	Nov. 13, 1877	393	115	12	824
189,195	Corron, Cesar, St. Etienne, France. Machine for dressing silk, &c., in hanks or skeins.	Apr. 3, 1877	160	56	11	580
197,103	Corson, Nahum, Rochester, N. H. Sleigh	Nov. 13, 1877	393	116	12	824
197,104	Corwin, John H., Newburg, N. Y. Truss	Nov. 13, 1877	394	116	12	825
189,429	Coryell, Miers. Paris, France. Stop-plug for boilers and other tubes	Apr. 10, 1877	423	133	11	62
186,116	Cosgrove, William N., and T. Moe, Faribault, Minn. Governor	Jan. 9, 1877	302	91	11	57
195,349	Cosgrove, William N., assignor of one-fourth interest to L. M. Fuller, Faribault, Minn. Grinding-mill	Sept. 18, 1877	616	182	12	503
193,397	Cosh, William M., Conshohocken, Pa. Gas-washing apparatus	July 24, 1877	883	270	12	156
195,206	Cosper, William H., Chicago, Ill. Weather-strip	Sept. 18, 1877	480	142	12	483
190,829	Costantino, Fregazzi, Philadelphia, Pa. Fireman's bolt	May 15, 1877	743	220	11	859
197,339	Coston, Henry H., assignor to M. J. Coston, Washington, D. C. Signal-cartridge	Nov. 20, 1877	646	191	12	870
	Coston, Martha J. (*See* Coston, Henry H., assignor.)					
	Coté, N. Joseph, *et al.* (*See* Lionne, Salomon, assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
190,471	Cotten, Joseph A., Thomaston, Ga. Box and box-holder	May 8, 1877	378	110	11	803
	Cotter & Co., R. (*See* Cotter, Robert, assignor.)					
	Cotter, David A. (*See* Pendleton, Harford E., assignor.)					
195,579	Cotter, Robert, assignor to R. Cotter & Co., Houston, Tex. Preparation of chewing-gum	Sept. 25, 1877	848		12	544
	Cotter, Samuel A. (*See* O'Neill, Andrew, assignor) (Reissue.)					
195,350	Cottle, Melvin, Richmond, Kans. Hand corn-planter	Sept. 18, 1877	617	182	12	503
194,957	Cottrell, Herbert, Newark, N. J. Machine for sawing stone	Sept. 11, 1877	212	66	12	437
186,805	Couch, David, Noblestown, Pa. Harrow	Jan. 30, 1877	1002	311	11	178
193,926	Couch, Edward J., Allegheny, Pa., assignor to self, J. and A. Smith, Youngstown, Ohio. Nail-plate-feeding machine	Aug. 7, 1877	122	39	12	251
196,971	Coughlin, Reese P., Cincinnati, Ohio. Compound for artificial marble	Nov. 13, 1877	253		12	804
192,416	Coulter, Columbus M., assignor to self and L. Johnston, Danville, Ill. Fire-place heater.	June 26, 1877	954	286	11	1130
197,999	Coulter, Thomas, and H. McKenzie, Bridgeport, Conn. Machine for turning carriage-axles	Dec. 11, 1877	299	92	12	998
186,115	Coulter, William B., Burlington, Conn. Match-box	Jan. 9, 1877	300	91	11	57
	Courath, Louis. (*See* Johnston & Courath.)					
193,322	Courtenay, William, New York, N. Y. Making hollow articles of vulcanized fiber	July 24, 1877	813		12	146
193,323	Same. Can or vessel from vulcanized fiber	July 24, 1877	814	250	12	146
195,885	Same. Harness-loop	Oct. 9, 1877	203	58	12	598
197,252	Same. Sound-board for musical instruments	Nov. 20, 1877	258	164	12	856
198,534	Same. Martingale-ring	Dec. 25, 1877	861	262	12	1095
187,821	Courtis, William M., Wyandotte, Mich. Ore-separator	Feb. 27, 1877	924	287	11	353
195,261	Cousland, William L., Philadelphia, Pa. Pick	Sept. 18, 1877	539	157	12	491
	Couture, Charles. (*See* De Landtsheer, Norbert, assignor.)					
	Covel, Charles H., *et al.* (*See* Sanders, J. Milton, assignor.)					
7,720	Covell, Calvin H., Stockton, Cal. Key-hole guard for locks (Reissue)	June 5, 1877	219	69	11	1006
197,253	Same. Wrench	Nov. 20, 1877	259	165	12	857
	Covell, Edward T. (*See* Maxfield, Charles P., assignor.)					
	Same. (*See* Maxfield, Charles P., assignor) (Reissue.)					
7,942	Covell, Edward T., New Bedford, Mass. Metallic vessel (Reissue)	Nov. 13, 1877	487	144	12	838
	Covell, William W. (*See* English & Covell.)					
	Coventry, W. M. (*See* Needles, Simgesmer, assignor.)					
190,744	Coverdill, Edward R., Darby, Pa. Mechanism for operating doffer-combs	May 15, 1877	672	199	11	849
194,584	Covert, John S., Modesto, Cal. Sack-holder	Aug. 28, 1877	830	247	12	368
192,977	Covode, Jacob, Hiawatha, Kans. Powder-flask	July 10, 1877	436	131	12	80
192,569	Cowan, Francis, Chicago, Ill. Animal-trap	July 3, 1877	14	4	12	14
198,574	Cowden, Robert, New Richmond, Pa. Hay and grain unloader	Dec. 25, 1877	893	273	12	1100
186,990	Cowell, John J., Newark, N. J. Trunk-roller	Feb. 6, 1877	77	26	11	212
193,851	Cowell, Rensselaer A., Cleveland, Ohio. Yielding car-platform	Aug. 7, 1877	50	16	12	241
189,610	Cowen, Robert, Cambridgeport, Mass. Machinery for manufacturing water-tight hose	Apr. 17, 1877	615	191	11	655
193,753	Cowing, William J., Washington, D. C. Call-bell	July 31, 1877	1253	376	12	217
197,965	Cowles, George B., assignor to N. G. Miller, Bridgeport, Conn. Lock for drawers	Dec. 11, 1877	270	82	12	993
	Cowles, Jennette L., administratrix. (*See* Cowles, Sidney.) (Reissue)					
198,082	Cowles, Samuel H., Oakville, Conn., assignor of one-half interest to B. B. Brower, Sacramento, Cal. Propelling vessels	Dec. 11, 1877	375	117	12	1010
7,696	Cowles, Sidney, deceased, Orange, E. Smith, Northford, and J. L. Cowles, Orange, Conn., administrators, and assignors to J. E. Wisner, Friendship, N. Y. Horse hay-rake (Reissue)	May 22, 1877	1148	344	11	921
197,340	Cowley, William A., Stamford, N. Y. Plow	Nov. 20, 1877	648	191	12	870
	Cox, Albert W. (*See* Phillco & Cox.)					
186,989	Cox, Edward and H., East Saint Louis, Ill. Earth-auger	Feb. 6, 1877	76	26	11	212
	Cox, Henry. (*See* Cox, Edward and H.)					
187,457	Cox, Joseph, Philadelphia, Pa. Sliding stove-door	Feb. 20, 1877	555	171	11	296
	Cox, Joseph L. (*See* Cox, William H. and J. L.)					
194,132	Cox, Silas W., New York, N. Y. Pad for copying-presses	Aug. 14, 1877	372	110	12	290
189,430	Cox, William H. and J. L., Milwaukee, Wis. Corn-harvester	Apr. 10, 1877	424	133	11	621
197,205	Cox, William J., Hamden Junction, assignor of one-half interest to J. Southward, Mount Sterling, Ohio. Flat-iron heater and reflector	Nov. 20, 1877	512	151	12	850
186,806	Cox, William P., Academy, N. Y. Animal-trap	Jan. 30, 1877	1002	311	11	178
	Coy, Frederic W. (*See* Corbett, Coy & Wheeler.)					
	Coy, Frederick W. (*See* Wheeler & Coy.)					
	Same. (*See* Wheeler, Loring & Coy.)					
187,103	Coyle, Hugh B., Philadelphia, Pa. Bedstead	Feb. 6, 1877	179	58	11	227
195,351	Crabb, James N., Richmond, Ind. Manger	Sept. 18, 1877	618	182	12	503
187,218	Crabtree, Nathan, Fall River, Mass. Composition for sizing	Feb. 13, 1877	301		11	255
190,472	Cragin, James T., Melrose, assignor of one-fourth interest to H. C. Hayden, Newton, Mass. Composition food	May 8, 1877	378		11	803
7,714	Craig, James H., Philadelphia, Pa. Composition glue (Reissue)	May 29, 1877	1455		11	968
192,235	Craig, Robert S., assignor to J. A. Morris, Cincinnati, Ohio. Plastering-hair bale	June 19, 1877	744	227	11	1091
196,336	Craik, James, La Crosse, Wis. Bail and driver for millstones	Oct. 23, 1877	695	200	12	683
	Craik, Joel T. (*See* McMahan & Craik.)					
7,884	Craik, Robert, Cataract, Wis. Middlings-purifier (Reissue)	Sept. 11, 1877	472	140	12	474
190,287	Crain, Gaylord H., Morrisville, N. Y. Toilet-cases	May 1, 1877	174	52	11	768
193,852	Crall, John J., Dry Ridge, Mo. Quilting-machine	Aug. 7, 1877	51	16	12	241
186,807	Cram, Alonzo W., Haverhill, Mass. Steam-radiator	Jan. 30, 1877	1003	312	11	178
197,831	Same. Combined safety apparatus and damper-regulator	Dec. 4, 1877	125	38	12	964
193,853	Cram, Marshall M., Mankato, Minn. Adding-machine	Aug. 7, 1877	52	17	12	241
	Cramp & Sons, Ship and Engine Building Company, William. (*See* Wilson, Joseph S., assignor.)					
198,083	Crandall, Edward M., assignor of one-half interest to C. H. Kirkham, Chicago, Ill. Fence-wire	Dec. 11, 1877	376		12	1010
	Crandall & Co., C. M. (*See* Crandall, Charles M., assignor.)					
193,398	Crandall, Albert R., Lexington, Ky. Engineers' plotting-table	July 24, 1877	883	270	12	156
191,570	Crandall, Charles, Newport, R. I. Skid attachments for wagons	June 5, 1877	57	17	11	984
187,104	Crandall, Charles M., assignor to C. M. Crandall & Co., Montrose, Pa. Toy cannon	Feb. 6, 1877	180	59	11	227
	Crandall, Gideon O., *et al.* (*See* Mattoni, Charles, jr., assignor.)					
197,341	Crandell, William T., and H. F. Ward, Tracy's Landing, Md. Oyster-dredging machinery	Nov. 20, 1877	649	191	12	870
	Crane, Breed & Co. (*See* Edgley, Edwin G., assignor.)					
	Crane Brothers Manufacturing Company. (*See* Sanford, William B., assignor.)					
	Crane, Charles E. (*See* Watson & Crane.)					
	Crane, Edward N., *et al.* (*See* Crane, Frederick, assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Crane, Frank M. (*See* Marsh, Timothy D., assignor.)					
188,726	Crane, Frederick, Bloomfield, assignor to self, E. N. Crane, Newark, and J. Crane, Bloomfield, N. J. Bridle-bit	Mar. 27, 1877	775	238	11	509
	Crane, Jason, *et al.* (*See* Crane, Frederick, assignor.)					
195,917	Crane, John S., Lake Village, N. H. Take-up for knitting-machine	Oct. 9, 1877	234	67	12	602
7,453	Cranoy, Thomas, Bay City, Mich. Saw-mill dog (Reissue)	Jan. 2, 1877	186	57	11	33
191,939	Same....Device for extracting mud from steam-boilers	June 12, 1877	420	130	11	1037
192,741	Same....Boiler-cleaner	July 3, 1877	181	52	12	38
189,340	Cranford, Hannah G., Peabody, Kans. Extension for sewing-machine tables	Apr. 10, 1877	338	108	11	610
	Cranford, John P. (*See* Abbott, Nathan B., assignor.)					
190,669	Crannell, Marvin L., Troy, N. Y. Corkscrew	May 15, 1877	596	177	11	839
	Crary, Albert B., *et al.* (*See* Leach, Daniel R., assignor.)					
195,580	Crater, Charles H., Owego, N. Y. Self-watering flower-vase	Sept. 25, 1877	849	252	12	544
186,808	Craven, Henry S., San Francisco, Cal. Self-acting trip for mining-buckets	Jan. 30, 1877	1004	312	11	178
196,787	Craven, Horatio N., Philadelphia, Pa. Worsted-roving frame	Nov. 6, 1877	49	15	12	767
187,105	Craw, Erastus H., assignor of one-half interest to W. W. Vanderbilt, Vallejo, Cal. Galvanic sole	Feb. 6, 1877	181	59	11	227
197,766	Crawford, George, Napoleon, Ohio. Adjustable ladder	Dec. 4, 1877	62	20	12	955
189,196	Crawford, John, New York, N. Y., assignor, by mesne assignments, to R. Chapman, Plainfield, N. J. Ice-tool	Apr. 3, 1877	162	56	11	581
196,436	Crawford, John, Vanlue, Ohio. Animal trap	Oct. 23, 1877	785	226	12	696
	Crawford, John G. (*See* Rushworth, Samuel, assignor.)					
193,641	Crawford, John M., Philadelphia, Pa. Manufacture of blanks for harrow-teeth	July 31, 1877	1148	344	12	202
197,611	Same....Combined shutter-fastener and bower	Nov. 27, 1877	938	279	12	921
	Crawford, Oliver H., *et al.* (*See* Pyke, James, assignor.)					
194,585	Creager, Jacob, and W. F. Thompson, Boscobel, Wis. Middlings-separator	Aug. 28, 1877	831	247	12	368
197,105	Creal, John M., Los Angeles, Cal. Device for perforating artesian-well tubes	Nov. 13, 1877	395	116	12	825
188,727	Creamer, George A., Philadelphia, Pa. Hatchway	Mar. 27, 1877	777	238	11	509
	Crebs, David H. (*See* Duncan, John P., assignor.)					
195,483	Crebs, Ellen, Huntsville, assignor to W. E. Miller, Carlisle, Pa. Fly-net for horses	Sept. 25, 1877	765	225	12	532
189,085	Cree, Charles E., assignor to self and J. E. Curtis, Marlborough, Mass. Last	Apr. 3, 1877	66	24	11	568
195,800	Cregier, Dewitt C., assignor to W. M. Cregier, Chicago, Ill. Compressed-air water-elevator	Oct. 2, 1877	105	31	12	576
	Cregier, William M. (*See* Cregier, Dewitt C., assignor.)					
189,431	Creighton, James R., assignor of one-half interest to A. B. Hall, Boston, Mass. Eave-trough cover	Apr. 10, 1877	425	134	11	622
	Creighton, William. (*See* Jenne & Creighton.)					
	Crenshaw, John B. (*See* Jennings, Reuben T., sr., assignor.)					
195,918	Cribben, Henry, Chicago, Ill., assignor to Equitable Co-operative Foundry Company, Rochester, N. Y. Stove-grate	Oct. 9, 1877	236	67	12	602
	Crichton, Elizabeth A., *et al.* (*See* Crichton, Robert and G. N., assignors.)					
	Crichton, George N. (*See* Crichton, Robert and G. N.)					
191,658	Crichton, Robert and G. N., Parkersburg, W. Va., assignors of one-third interest to J. Rees, Pittsburg, Pa.; said R. Crichton assignor to E. A. Crichton, Parkersburg, W. Va. Bung-cutter	June 5, 1877	139	43	11	995
197,924	Crickmer, Richard J., assignor of one-half interest to J. E. C. Koch, London, England. Steam and other cocks or taps	Dec. 11, 1877	226	69	12	987
187,458	Crighton, William, assignor to American Screw Company, Providence, R. I. Machine for tapping nuts	Feb. 20, 1877	555	172	11	296
194,415	Crippen, Abraham T., Cincinnati, Ohio. Till or money-drawer	Aug. 21, 1877	655	197	12	335
186,200	Crisfield, George H., Yonkers, N. Y. Refrigerator	Jan. 16, 1877	394	120	11	76
186,308	Crispin, Silas, New York, N. Y. Ordnance	Jan. 16, 1877	486	149	11	89
197,206	Crist, Christian S., and E. Berrian, New York, N. Y. Refrigerator	Nov. 20, 1877	512	151	12	850
188,012	Crist, John L. and W. E., and G. H. Smith, Sacramento, Cal. Thill-coupling	Mar. 6, 1877	88	25	11	392
	Crist, William E. (*See* Crist & Smith.)					
189,611	Cristadoro, Charles, New York, N. Y. Valve-nozzle for bottle-stoppers	Apr. 17, 1877	617	191	11	655
193,927	Criswell, James A., Mifflintown, Pa. Hame-tug attachment	Aug. 7, 1877	124	39	12	252
195,444	Critchley, James S., Cleveland, Ohio. Steam-gage siphon	Sept. 25, 1877	720	213	12	526
190,473	Crittenden, Charles C., San Francisco, Cal. Trace-fastener	May 8, 1877	379	110	11	803
	Crittenden, Howard B., *et al.* (*See* Pitcher, Jonathan E., assignor.)					
	Crittenden, James H. (*See* Rich, Augustus E., assignor.)					
	Same....(*See* Rich, Augustus E., assignor) (Reissue.)					
	Crittenden, Thomas T., *et al.* (*See* Pitcher, Jonathan E., assignor.)					
195,093	Croake, Daniel, Milwaukee, Wis. Shipping-can	Sept. 11, 1877	352	106	12	457
188,598	Crocker, Horace E., and G. C. Farnsworth, Buffalo, N. Y. Fluting and smoothing iron.	Mar. 20, 1877	640	198	11	483
194,653	Crocker, James A., Providence, R. I. Revolving fire-arm	Aug. 28, 1877	887	265	12	377
195,987	Crocker, Richard, and W. H. Lytle, Des Moines, Iowa. Car-starter	Oct. 9, 1877	310	87	12	612
	Crocker, Rufus C. (*See* Foster, Hickman E., assignor.)					
194,133	Crocker, Silas S., and A. Wilcox, Clarence, Iowa. Nut-lock	Aug. 14, 1877	372	110	12	290
196,337	Same....Iron fence-post	Oct. 23, 1877	696	200	12	683
192,638	Croft, Edward, assignor to Waterbury Manufacturing Company, Waterbury, Conn. Umbrella-tip	July 3, 1877	87	26	12	24
188,235	Croft, John F., and H. B. Pitner, Laporte, Ind. Carriage-top brace	Mar. 13, 1877	282	88	11	424
194,416	Croft, Matthew E., Horicon, Wis. Tricycle	Aug. 21, 1877	656	197	12	336
188,599	Croggon, Henry, assignor to self and G. S. Prindle, Washington, D. C. Packaging coin.	Mar. 20, 1877	641	198	11	483
190,708	Crompton, George, Worcester, Mass. Heddle-frame	May 15, 1877	634	189	11	844
193,439	Same....Car-truck	July 24, 1877	922	280 281	12	102
191,317	Crompton, George, and H. Wyman, Worcester, Mass. Shedding or harness operating mechanism for looms	May 29, 1877	1243	374	11	943
195,489	Crompton, William C., New York, N. Y., J. Nicol, Newark, and R. Hawley, jr., Jersey City, N. J. Freight-chute	Sept. 25, 1877	765	225	12	532
187,107	Cromwell, John, Cranford, N. J. Coffee-pot	Feb. 6, 1877	182	59	11	227
	Cromwell, Richard, *et al.* (*See* Clarkson, Frank S., assignor.)					
	Cromwell, Richard, *et al.* (*See* Luppert, George, assignor.)					
198,278	Cronin, John T., Boston, Mass. Knife-cleaner	Dec. 18, 1877	607	183	12	1019
186,991	Cronk, Jasper T., Hoboken, N. J. Line-fastener	Feb. 6, 1877	78	26	11	212
195,490	Crooke, John J., Southfield, N. Y. Manufacture of tin-foil	Sept. 25, 1877	766	225	12	532
194,586	Crooker, George A., Charlottesville, Va. Clothes-pounder	Aug. 28, 1877	832	247	12	368
	Crooker, Heman D. (*See* Brooks, Albert A., assignor.)					
192,862	Crooker, William W., Waukegan, Ill. Fire-extinguisher	July 10, 1877	331	98	12	65
	Crosby, Abel A. (*See* Gilzinger, Sebastian, assignor.)					
188,859	Crosby, Addison, assignor to Central Propelling Company, New York, N. Y. Power steering apparatus	Mar. 27, 1877	919	279 280	11	508

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
190,129	Crosby, Addison, assignor to Central Propelling Company, New York, N. Y. Construction of boats and vessels	May 1, 1877	17	4	11	748
195,581	Crosby, Augustine B., Greene, Me., assignor to United States Gold and Silver Amalgamating Company, Virginia Apparatus for roasting ores	Sept. 25, 1877	850	252	12	544
197,106	Same.....Apparatus for leaching ores	Nov. 13, 1877	396	116	12	825
7,986	Crosby, Chauncey O., New Haven, assignor, by mesne assignments, to Straw-Sewing Machine Company, Milford, Conn. Sewing-machine.....(Reissue)..	Dec. 11, 1877	479	150	12	1023
196,290	Crosby, George A., and G. W. White, Chicago, Ill.; said White assignor to said Crosby, Chicago, Ill. Machine for forming barbs for wire fences	Oct. 23, 1877	645	187	12	676
190,010	Crosby, George W., Bradford, Ark. Churn	Apr. 24, 1877	1041	317	11	718
194,992	Crosby, Henry C, Chicago, Ill. Railway-signal	Sept. 11, 1877	246	74	12	441
189,303	Crosby, Mark, Wakefield, Mass. Wardrobe-bedstead	Apr. 10, 1877	302	95	11	606
7,659	Crosby, Robert R., Boston, Mass., assignor to F. S. Shirley. Lamp-chimney. (Reissue)..	May 8, 1877	569	169	11	828
189,304	Cross, Alonzo T., Providence, R. I. Fountain-pen	Apr. 10, 1877	303	96	11	606
190,130	Same.....same	May 1, 1877	18	5	11	749
191,798	Same.....same	June 12, 1877	278	87	11	1019
188,005	Cross, Daniel K., Boston, Mass. Tip for boots and shoes	Mar. 6, 1877	48	13	11	387
	Cross, George W., *et al.* (*See* Keating, Daniel E., assignor.)					
193,489	Cross, Ira D., Reno, Nev. Fire-escape	July 24, 1877	968	294	12	168
7,772	Cross, John R., Cleveland, Ohio, assignor to H. H. Bliss, Chester, Pa. Packing for oil-wells.....(Reissue)..	July 3, 1877	261	77	12	47
7,902	Cross, John R., Cleveland, Ohio, assignor to H. H. Doubleday, Washington, D. C. Packing for oil-wells.....(Reissue)..	Oct. 2, 1877	190	54	12	588
191,318	Cross, John R., Cleveland, Ohio. Graining-machines	May 29, 1877	1245	375	11	943
193,854	Same.....Securing pillow-shams	Aug. 7, 1877	53	17	12	242
191,227	Cress, William R., Piedmont, W. Va. Draft-rod for tenders	May 29, 1877	1165	349	11	932
	Crossley, Francis W. (*See* Otto & Crossley.)					
194,993	Crossley, Harry A., Cleveland, Ohio. Belting	Sept. 11, 1877	248	75	12	442
	Crossley, John W. (*See* Leftwich & Crossley.)					
189,703	Crossley, Joseph, Trenton, N. J. Ice-creeper	Apr. 17, 1877	706	217	11	667
	Crossley, William J. (*See* Otto & Crossley.)					
196,076	Crossman, Charles P., West Warren, Mass. Salt-bottle	Oct. 16, 1877	410	119	12	635
198,355	Crotzer, William, assignor of one-half interest to D. F. Keagy, Woodbury, Pa. Thrashing-machine	Dec. 18, 1877	672		12	1058
195,582	Crouse, Randolph R., Bellaire, Ohio. Fire-fender	Sept. 25, 1877	851	253	12	545
189,612	Cronshorn, David, and W. McBee, Panther Springs, Tenn. Washing-machine	Apr. 17, 1877	618	191	11	655
198,575	Crowell, Chester L., Rockdale, N. Y. Weighing-scales	Dec. 25, 1877	894	273	12	1100
195,095	Crowell, Harry P., Philadelphia, Pa. Ice-elevator	Sept. 11, 1877	354	107	12	457
192,056	Crowell, Henry C., New London, Conn. Composition vehicle for paints	June 19, 1877	564		11	1068
191,518	Crowell, James E., Chelsea, assignor to A. Merrill, Boston, Mass. Boiler-furnace and air-supplying apparatus	June 5, 1877	8	3	11	978
188,343	Crowell, John S., Louisville, Ky. Animal-trap	Mar. 13, 1877	383	120	11	438
186,309	Crowell, Luther C., Boston, Mass. Paper-folding machine	Jan. 16, 1877	488	150	11	89
188,779	Same.....Paper folding and delivering machine	Mar. 27, 1877	837	255	11	517
194,994	Crowell, William, Dennis, Mass. Ventilating-barrel for shipping fruits, vegetables, &c.	Sept. 11, 1877	248	75	12	442
190,745	Crowninshield, Mary B., Washington, D. C. Darning-last	May 15, 1877	672	199	11	849
195,094	Crowther, Joshua, Chicago, Ill. Flower-pot	Sept. 11, 1877	353	107	12	457
	Crowthers, Joseph B. (*See* Powell, John A., assignor.)					
	Cruikshank, John. (*See* Cruikshank, William Y., assignor.)					
195,583	Cruikshank, William Y., assignor to J. Cruikshank, Shamokin, Pa. Car-wheel	Sept. 25, 1877	852	253	12	545
193,364	Crum, Charles L., Winchester, Va. Machine for lining paper	July 24, 1877	853	261	12	151
	Crum, Milton. (*See* Crum, Oliver and Milton.)					
186,313	Crum, Oliver and M., Monsey, N. Y. Car-coupling	Jan. 16, 1877	494	151	11	90
188,600	Crumbie, Alexander, Nyack, assignor to self and D. Donald, Brooklyn, N. Y. Oven	Mar. 20, 1877	642	198	11	483
196,880	Crume, William E., and P. M. Aulabaugh, assignors to Aulabaugh, Crume & Co., Dayton, Ohio. Paper dish	Nov. 6, 1877	151	45	12	781
	Crump, Jonathan S. (*See* Selden, Griswold & Crump.)					
193,226	Crump, Thomas J., Buena Vista, Tex. Gang-plow	July 17, 1877	692	212	12	122
192,900	Cubitt, John A., Brockport, N. Y. Reciprocating churn	July 10, 1877	366	108	12	70
188,286	Culberton, Mack, Lake City, Minn. Pomade	Mar. 13, 1877	327		11	430
194,224	Culbertson, George A., Kenton County, Kentucky. Culinary vessel	Aug. 14, 1877	451	137	12	302
	Cullen, Edward F., *et al.* (*See* Jones, Evan J., assignor.)					
	Culter, Sandmeyer & Co. (*See* Znayle, William, assignor.)					
195,988	Culter, Theodore D., Westminster, Cal. Rod-coupling	Oct. 9, 1877	311	87	12	612
	Culver, Charles. (*See* Walker, Jonathan, assignor.)					
191,117	Culver, Elias, Mason, Mich. Tag	May 22, 1877	1040	311	11	906
	Culver, Ira. (*See* Byers, John, assignor.)					
194,076	Culver, James H., San Francisco, Cal. Ticket-envelope	Aug. 14, 1877	294	88	12	281
195,989	Culver, John P., San Francisco, Cal. Forming and lining ditches, flumes, &c	Oct. 9, 1877	312	87	12	612
195,990	Same.....Preserving wooden piles and timber	Oct. 9, 1877	313	88	12	613
186,312	Cuming, Mari A., and J. Knight, New York, N. Y. Wiring and binding hats	Jan. 16, 1877	493	151	11	89
189,704	Cumming, Alex. M., Elizabeth, N. J. Locomotive-engine	Apr. 17, 1877	707	218	11	667
196,113	Cumming, David, deceased, by A. S. Sullivan, administrator, New York, N. Y. Nut-lock and washer for bolts	Oct. 16, 1877	455	133	12	641
196,635	Cummings, Amos, assignor of one-half interest to H. H. Ham, Boston, Mass. Sash-fastener	Oct. 30, 1877	1000	291	12	737
	Cummings, Charles C., *et al.* (*See* Birch, John S., assignor)(Reissue.)					
195,096	Cummings, James K., Ladonia, Tex. Washing-machine	Sept. 11, 1877	355	107	12	457
190,011	Cummings, Richard M., Nashua, N. H. Machine for making horseshoe-nails	Apr. 24, 1877	1042	317 318	11	718 719
192,236	Same.....Horseshoe-nail machine	June 19, 1877	745	227 228	11	1092
192,237	Same.....Cut-nail machine	June 19, 1877	746	228	11	1092
192,570	Cummings, Samuel M., assignor of two-thirds interest to J. White and J. Marquis, Allegheny, Pa. Car-bumper	July 3, 1877	15	4	12	14
189,341	Cummings, Sexton S., assignor of one-third interest to W. C. Stevenson, Turner's Point, Tex. Bridle attachment	Apr. 10, 1877	338	108	11	610
196,788	Cummings, Uriah, assignor to self and H. W. White, Buffalo, N. Y. Rock-drill	Nov. 6, 1877	50	15	12	768
	Cummings, William A., *et al.* (*See* Birch, John S., assignor).....(Reissue.)					
194,996	Cummings, William A., assignor of one-half interest to F. A. Hart, Hartford, Conn. Car-coupling	Sept. 11, 1877	250	76	12	442
187,706	Cummings, William D., Pittsburg, Pa. Lamp-reflector	Feb. 27, 1877	809	251	11	338
187,518	Cummins, John R., McKinney, Tex. Gang-plow	Feb. 20, 1877	688	190	11	303
187,822	Cummins, William G., Cookville, Tenn. Sewing-machine	Feb. 27, 1877	925	287	11	353
194,995	Same.....same	Sept. 11, 1877	249	75	12	442

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192,571	Cumnock, John, Great Falls, N. H. Machine for warping yarn	July 3, 1877	15	5	12	14
192,817	Cunningham, Albert, assignor to J. M. Stowell, Milwaukee, Wis. Saw-mill dog	July 10, 1877	289	84	12	59
193,593	Cunningham, Albert, Milwaukee, Wis. Millstone-driver	July 31, 1877	1100	330	12	196
195,804	Cunningham, Andrew, Troy, N. Y. Automatic expansion-gearing for steam-engines.	Oct. 2, 1877	108	32	12	577
	Cunningham, Dominiek O. (*See* Arbogast, Philip, assignor.)					
194,958	Cunningham, George W., Greene, N. Y. Butter-worker	Sept. 11, 1877	213	66	12	437
195,097	Cunningham, Isaac N., Rainard, Ill. Fence	Sept. 11, 1877	356	107	12	457
	Cunningham, Thomas, *et al.* (*See* Kenowles, Proctor & Pendleton, assignors.)					
190,830	Cunningham, William R., La Fayette, Ind. Attachment for corn-planters	May 15, 1877	744	220	11	859
190,288	Curd, John J., Rockfield, Ky. Reciprocating churn	May 1, 1877	175	52	11	768
189,432	Curran, John J., assignor of one-third interest to C. Wilcox, Chicago, Ill. Lumber-drier	Apr. 10, 1877	426	134	11	622
191,659	Currier, Jacob B., Lowell, Mass. Saw-guide for cutting miters, &c	June 5, 1877	140	44	11	995
191,752	Currier, John J., assignor to I. C. Mayo, Gloucester, Mass. Rowlock	June 12, 1877	236	75	11	1013
192,417	Currier, Jonathan T., Neponset, Ill. Road-scraper	June 26, 1877	955	286	11	1130
	Currier, Leonard G. (*See* Newell, John G., assignor.)					
188,860	Currier, William H., Toledo, Ohio. Organ-stop knob	Mar. 27, 1877	921	280	11	528
187,519	Curry, George J., Chemung, Ill. Car-coupling	Feb. 20, 1877	613	190	11	3034
193,928	Same.....Clothes and fruit drier	Aug. 7, 1877	125	39	12	252
192,742	Curry, James L., Oskaloosa, Iowa. Corn harrow and cultivator	July 3, 1877	182	53	12	38
191,839	Curtis, Andrew J., Monroe, Me. Car-starter	June 12, 1877	324	100	11	1024
192,901	Curtis, Andrew J., assignor to self and E. H. Neally, Monroe, Me. Screw-driver	July 10, 1877	367	108	12	70
7,670	Curtis, Charles M., Philadelphia, Pa., assignor, by mesne assignments, to M. M. Johnson, New York, N. Y. Dental engine (Reissue)	May 8, 1877	579	172	11	830
187,358	Curtis, Cecelia C., San Francisco, Cal. Undergarment	Feb. 13, 1877	443	139	11	274
	Curtis, David A. (*See* Bowers & Curtis.)					
	Curtis, David W. (*See* Cornish & Curtis.)					
189,705	Curtis, George H. W., New York, N. Y. Braider for sewing-machines	Apr. 17, 1877	708	218	11	667
188,861	Curtis, Henry, Chicago, Ill. Grain-binder	Mar. 27, 1877	921	280	11	528
195,098	Curtis, Henry, Chicago, Ill., assignor to J. H. Gordon, Rochester, N. Y. Grain-binder	Sept. 11, 1877	356	108	12	457
190,559	Curtis, Israel W., Wilton, N. H. Fruit-conductor	May 8, 1877	459	136	11	814
	Curtis, James. (*See* Curtiss & Curtis.)					
198,000	Curtis, James, assignor to self and I. Null, Middletown, Mo. Propelling and dry-dock attachment for vessels	Dec. 11, 1877	301	92	12	998
	Curtis, J. E. (*See* Cree, Charles E., assignor.)					
	Curtis, Jeremiah W. (*See* Schooley, John C., assignor.)					
188,105	Curtis, John B., Portland, Me. Dredging-bucket	Mar. 6, 1877	136	41	11	399
185,896	Curtis, Moseley, assignor to R. R. Colburn, Ansonia, Conn. Hose-coupling	Jan. 2, 1877	84	25	11	19
186,310	Same.....Hose-nozzle	Jan. 16, 1877	491	150	11	89
188,862	Curtis, Philip B, assignor to self and J. C. Tilton, Haverhill, Mass. Life-boat	Mar. 27, 1877	922	281	11	529
121,279	Curtis, Samuel, Cleveland, Ohio. Steam-valve	May 29, 1877	1212	364	11	938
	Curtis, T. A. (*See* Partridge, Andrew, assignor.)					
196,564	Curtis, William B., assignor to self and R. R. Armor, Oil City, Pa. Sucker-rod adjuster	Oct. 30, 1877	937	271	12	728
196,140	Curtis, Zelotes, Janesville, Wis. Sash-holder	Oct. 16, 1877	485	140	12	645
	Curtiss, Booth N. (*See* Brown & Huey, assignors.)					
	Curtiss, Carlos B. (*See* Cuzner, John B., assignor.)					
187,823	Curtiss, Charles C., and J. Curtis, Chicago, Ill. Indicator	Feb. 27, 1877	926	287	11	353
	Curtiss, James M., *et al.* (*See* Bullock, Ephraim K., assignor.)					
198,190	Curtiss, Marshall S., assignor of two-thirds interest to J. B. Doyle and H. Phenix, Bradford, Ill. Gang-plow	Dec. 18, 1877	507	157	12	1034
194,654	Curtiss, Nathan P. B., Boston, Mass. Indicator for pianos or organs	Aug. 28, 1877	888	265	12	377
186,311	Cusenier, Eugene, sr., Paris, France. Combined bottle and basket	Jan. 16, 1877	492	150	11	89
186,809	Cushman, Andrew R., Memphis, Mo. Wagon-hound	Jan. 30, 1877	1005	312	11	178
189,433	Same.....Hub-cap and axle-nut	Apr. 10, 1877	429	134	11	622
	Cushman, Charles H., *et al.* (*See* Knapp, A. Haydn, assignor.)					
	Cushman, Cyrus S. (*See* Stoops & Cushman.)					
197,107	Cushman, Cyrus S., assignor to N. D. Stoops, Philadelphia, Pa. Take-up mechanism for sewing-machines	Nov. 13, 1877	397		12	825
190,670	Cushman, Henry S., and J. S. Brigham, Milford, Mass., assignors to said Cushman. Shoe-nail	May 15, 1877	597	177	11	839
192,902	Cushman, Henry T., North Benningtoo, Vt. Lead-pencil	July 10, 1877	367	109	12	70
196,636	Same.....Rolling pocket-tablet	Oct. 30, 1877	1001	292	12	738
194,655	Cussen, William J., assignor of one-half interest to M. Milhiser & Co., Richmond, Va. Tobacco-bag	Aug. 28, 1877	888	265	12	377
191,838	Custer, Joseph, Goshen, Ohio. Combined potatoe and corn planter	June 12, 1877	323	100	11	1024
197,612	Cutler, William C., Chelsea, Mass. Prepared vaccine matter	Nov. 27, 1877	939	279	12	922
	Cutter, Charles N. (*See* Wesson & Cutter.)					
7,668	Cutter, James S., Brooklyn, N. Y., assignor to James M. Davis. Preparing vegetable fiber for upholstering (Reissue)	May 8, 1877	577	171	11	830
187,520	Cutting, Lewis, San Francisco, Cal. Tip-cup for umbrellas	Feb. 20, 1877	614	190	11	304
190,560	Same.....Can-opener	May 8, 1877	460	136	11	814
192,743	Same.....Soldering-tool	July 3, 1877	183	53	12	38
197,018	Cuzner, John B., assignor to self and C. B. Curtiss, Bridgeport, Conn. Animal-trap	Nov. 13, 1877	297	88	12	811
	Daboll, William V. (*See* Johnson, Benson W., assignor.)					
192,572	Dafoe, William Z., assignor of one-half interest to C. W. and W. W. Marsh, Sycamore, Ill. Wire-stretcher	July 3, 1877	16	5	12	14
	Daggett, Clara V., *et al.* (*See* Wilcox, Percy & Daggett, assignors.)					
193,227	Daggett, Ellsworth, Salt Lake City, Utah. Mine-pump	July 17, 1877	694	212	12	122
193,228	Same.....same	July 17, 1877	696	213	12	122
188,863	Daggett, Harvy P., assignor of one-third interest to A. B. Ellis, Troy, Mo. Churn	Mar. 27, 1877	923	281	11	529
	Daggett, John C. (*See* Whitcomb & Daggett.)					
	Daggett, John F. (*See* Wilcox, Percy & Daggett.)					
194,806	Daheney, Thomas L., Stoneham, Mass. Machinery for scouring and dressing leather	Sept. 4, 1877	52	17	12	407
186,713	Dahlborn, Swain, Carpenterville, Ill. Wheel cultivator	Jan. 30, 1877	913	283	11	166
189,305	Daigle, Marcelin, Houma, La. Magazine cane-gun	Apr. 10, 1877	301	96	11	606
	Dail, John H. (*See* Jones, Asa, assignor.)					
	Dailey, P. A. (*See* Sealy, Edward, assignor (Reissue.)					
195,099	Dailey, Parley A, Brooklyn, N. Y. Felted fabric	Sept. 11, 1877	357	108	12	457
198,356	Same.....Manufacture of ornamented felt skirts	Dec. 18, 1877	673	206	12	1059
198,357	Same.....Manufacture of articles of felt	Dec. 18, 1877	674	206	12	1059
198,358	Same.....Manufacture of ornamental fabrics	Dec. 18, 1877	675	206	12	1059
195,100	Dailey, William H., Omaha, Nebr. Drill for socket-couplings	Sept. 11, 1877	358	108	12	457

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	Daillier, Constant. (*See* Japy & Daillier.)					
197,613	Daily, Samuel J., Kansas City, Mo. Feed-cooker	Nov. 27, 1877	940	279	12	922
	Dale, Edward, *et al.* (*See* Johnson, John D., assignor.)					
197,108	Dale, William, San Lorenzo, Cal. Tinners' machine stand	Nov. 13, 1877	398	117	12	825
7,964	Daley, George H., deceased, and R. M. Treat, assignors, by mesne assignments, to R. M. Treat, Morris, Conn., and W. H. Field, Port Chester, N. Y. Horse hay-rake (Reissue)	Nov. 27, 1877	1064	319	12	938
	Dalton, George. (*See* Marsden, Henry R.)					
197,254	Dalton, John, Bouchea, Wis. Neck-yoke adjuster	Nov. 20, 1877	559	165	12	857
	Dalton, Michael. (*See* Kelly, James, assignor.)					
194,656	Dalton, Milton A., Cincinnati, Ohio. Time-lock	Aug. 28, 1877	889	265, 266	12	378
194,896	Same.....same	Sept. 4, 1877	135	42, 43	12	419
190,289	Daly, Daniel A., Detroit, Mich. Sewing-machine shuttle	May 1, 1877	175	52	11	768
	Daly, Patrick M. (*See* Murphy, Thomas J., assignor.)					
194,894	Daly, Richard B., Newton Upper Falls, Mass. Altar-bread, wafer, or waffle baker	Sept. 4, 1877	133	42	12	419
189,197	Daly, William F., Peru, assignor of one-half interest to E. D. Olin, Indianapolis, Ind. Table-leaf support	Apr. 3, 1877	162	56	11	581
	Dalzell & Ives Wrought Box Company. (*See* Morse, Gilbert, assignor.)					
	Dalzell, A. F., trustee. (*See* Evans, Henry C, assignor.)					
	Dalzell, A. Filson, trustee. (*See* Dalzell, Robert H., assignor.)					
189,434	Dalzell, David, South Egremont, Mass. Axle-box	Apr. 10, 1877	429	135	11	622
195,805	Same.....Manufacture of axle-boxes	Oct. 2, 1877	110	33	12	577
	Dalzell, John H., *et al.* (*See* Smith, William, assignor) (Reissue.)					
192,324	Dalzell, Robert H., Allegheny County, assignor to A. F. Dalzell, trustee, Pittsburg, Pa. Pipe-plug	June 26, 1877	865	261	11	119
194,895	Damlos, Ferdinand, Sandusky, Ohio. Shoemakers' pounding-iron	Sept. 4, 1877	134	42	12	419
	Damme, Henry. (*See* Weber & Damme.)					
192,903	Damon, John F., Rockland, Mass. Saw-tooth adjuster	July 10, 1877	368	109	12	70
198,576	D'Amore, Antonio, New York, N. Y. Fire-escape ladder	Dec. 25, 1877	895	274	12	1100
187,256	Dana, Edward A., Boston, Mass. Windmill	Feb. 13, 1877	339	108	11	260
188,236	Same.....same	Mar. 13, 1877	283	88, 89	11	424
190,709	Dancel, Christian, New York, N. Y. Machine for sewing boots and shoes	May 15, 1877	635	189	11	844
196,197	Dancel, Christian, New York, and E. C. Smith, Brooklyn, N. Y. Machinery for splitting and beveling leather	Oct. 16, 1877	537	156	12	652
195,491	Danford, Ebenezer, Geneva, Ill. Car-axle	Sept. 25, 1877	768	226	12	532
197,966	Danforth, George, and W. Smith, Cochituate, Mass. Wheel for dressing boot and shoe soles	Dec. 11, 1877	271	83	12	993
191,840	Daniels, Aaron M., and S. I. Tuttle, Hartford, Conn. Felted fabric	June 12, 1877	325	101	11	1024
195,886	Daniels, Aaron M., Hartford, Conn. Water-proof insole for boots and shoes	Oct. 9, 1877	204	58	12	598
186,117	Daniels, Byron T., Utica, N. Y. Churn	Jan. 9, 1877	302	91, 92	11	57
190,474	Daniels, George W., Lexington, Ohio. Indicator	May 8, 1877	380	110	11	803
194,387	Daniels, Jeremiah, Sharon, Wis. Attachment for carpenters' squares	Aug. 28, 1877	832	247	12	368
8,019	Daniels, William, New York, N. Y., assignor to H. E. Towle. Fare-register (Reisaue)	Dec. 25, 1877	1074	325	12	1126
190,131	Danielson, Peter A., Portsmouth, N. H. Rowlock	May 1, 1877	19	5	11	749
191,408	Dann, Isaac N., assignor to New Haven Folding-Chair Company. Folding chair	May 29, 1877	1321	401	11	953
7,523	Danner, John, Canton, Ohio. Revolving book-case (Reissue)	Feb. 20, 1877	786	244	11	327
197,925	Same.....Revolving dry-goods stand	Dec. 11, 1877	227	69	12	987
191,519	Darby, Catharine L., Fort Motte, S. C. Sealing device for bottles, jars, &c	June 5, 1877	10	3	11	978
	Darby, William H. (*See* West & Darby.)					
195,492	Darcy, Thomas F., New York, N. Y. Combined cane and umbrella	Sept. 25, 1877	769	226	12	532
190,831	Dare, William H., Whitestone, N. Y. Clewing up gaff-topsails	May 15, 1877	744	221	11	859
191,409	Dargitz, Marion, Creston, Iowa. Potato-digger	May 29, 1877	1321	401	11	953
197,255	Dark, Thomas, Buffalo, N. Y. Receiver and stench-trap for sewers	Nov. 20, 1877	560	165	12	857
191,754	Darke, John R, and D. S. Smith, South Evanston, Ill. Ash-sifter	June 12, 1877	237	75	11	1014
191,033	Darling, Charles E., assignor of two-thirds interest to H. Free and J. E. Lydston, Lewiston, Me. Ventilator	May 22, 1877	964	286	11	895
189,022	Darling, Samuel, Providence, R. I. Railway-car ventilator	Apr. 3, 1877	12	4	11	560
	Darling, William H. (*See* Wildrick & Darling.)					
	Darlington, Eugene. (*See* Burk, Roswell W., assignor.)					
	Darnall Brothers. (*See* Knox, Robert A., assignor.)					
187,824	Darozir, Levi, assignor to C. B. Travis, Natick, Mass. Last	Feb. 27, 1877	927	238	11	353
	Darrell, Henry N. (*See* De Cordova, Wise, & Darrell.)					
196,637	Dart, Lewis, assignor to H. W. and O. W. Bullock, Springfield, Mass. Automatic time-table announciator	Oct. 30, 1877	1001	292	12	738
191,118	Dartt, J. Frank, and J. W. Post, New York, N. Y. Fire-escape	May 22, 1877	1040	312	11	906
196,338	Dassori, Frederick, New York, N. Y. Ceiling for grain-vessels	Oct. 23, 1877	697	201	12	683
194,657	Date, Samuel H., Rochester, Minn. Clamp for use in painting shutter-blinds	Aug. 28, 1877	893	266	12	378
196,638	Daul, Anthony, assignor of one-half interest to G. Winckhofer, Newark, N. J. Canceling stamps	Oct. 30, 1877	1006	293	12	738
	Daum, Frederick E. (*See* Whiting & Daum.)					
187,602	D'Auria, Luigi, Gaetano, Italy. Rotary engine	Feb. 20, 1877	685	212	11	313
190,012	Same.....Water-wheel	Apr. 24, 1877	1044	318	11	719
197,342	D'Auria, Luigi, Baltimore, Md. Seal-lock	Nov. 20, 1877	650	192	12	871
	D'Autrey, Charles M. (*See* Burst & D'Autrey.)					
185,821	Davenport, Frederick S., Jerseyville, Ill. Wheel-plow	Jan. 2, 1877	8	3	11	10
193,229	Davenport, Joseph, Massillon, Ohio. Rotary engine	July 17, 1877	677	213	12	122
195,747	Same.....Fire-escape	Oct. 2, 1877	57	17	12	569
189,846	Davenport, Morris, and M. H. Hicks, said Hicks assignor to W. W. Hare, Groton, N. Y. Wire-stretcher	Apr. 24, 1877	872	266	11	696
198,001	Davey, Elijah C., Batavia, Ill. Anti-friction journal-box	Dec. 11, 1877	302	93	12	998
186,118	Davey, Henry, Leeds, England. Pumping-engine	Jan. 9, 1877	303	92, 93	11	57
186,119	Same.....Engine for pumping and compressing air, &c	Jan. 9, 1877	304	93	11	57
	Davidson Brothers. (*See* Heeley, James L., assignor.)					
191,940	Davidson, James, Kalida, Kans. Broom	June 12, 1877	421	130	11	1037
198,084	Davidson, Joseph, Berlin, Prussia. Electrical regulator for governing the flow of gas to heating apparatus	Dec. 11, 1877	376		12	1010
188,866	Davidson, Noble M., Ada, Ohio. Portable and traction engine	Mar. 27, 1877	926	282	11	529
	Davies, Edwin M. (*See* De La Vergne & Davies.)					
193,929	Davies, Henry, Newport, Ky. Double hydraulic elevator	Aug. 7, 1877	126	39, 40	12	252
188,864	Davies, Henry J., New York, N. Y. Combined clock and mirror	Mar. 27, 1877	924	281	11	529
188,865	Davies, Henry J. and W. D., New York, N. Y. Alarm-clock	Mar. 27, 1877	924	281	11	529
190,671	Davies, Henry J., Brooklyn, N. Y. Clock-dial	May 15, 1877	598	177	11	840
193,930	Davies, Henry J. and W. D., Brooklyn, N. Y. Automatic smoking sign	Aug. 7, 1877	130	40	12	252

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
197,832	Davies, Henry J. and W. D., Brooklyn, N. Y. Pendulum-clock	Dec. 4, 1877	126	39	12	964
198,577	Same..... Illuminated-dial clock	Dec. 25, 1877	896	274	12	1101
194,658	Davies, James, Liverpool, England. Auxiliary steering-gear	Aug. 28, 1877	894	267	12	378
198,535	Davies, James, Wednesbury, England. Reciprocating engine	Dec. 25, 1877	861	262	12	1095
	Davies, Joshua. (*See* Duck, Simeon, assignor.)					
190,562	Davies, Robert H., Phenixville, Pa. Truss-bridge	May 8, 1877	461	137	11	814
	Davies, Walter D. (*See* Davies, Henry J. and W. D.)					
194,134	Davies, William, Henderson, Ky. Tobacco stripping and drying machine	Aug. 14, 1877	373	111	12	290
194,807	Same.....Cigarette-machine	Sept. 4, 1877	53	18	12	407
197,343	Davies, William O., Milwaukee, Wis. Car-door	Nov. 20, 1877	651	192	12	871
	Davis & Co., W. C. (*See* Davis, William C., assignor.)					
	Davis, A. B. (*See* Quirk, John B., assignor.)					
186,664	Davis, Abram F., Liscomb, Iowa. Harrow	Jan. 30, 1877	868	268	11	159, 160
	Davis, Ambrose L. (*See* Davis, Levi A. and A. L.)					
190,421	Davis, Andrew J., Pittsburg, Pa., assignor of one-half interest to J. J. Johnston, Columbiana, Ohio. Spinning-top	May 8, 1877	323	95	11	797
	Davis, Arthur W. (*See* Davis, Daniel and A. W.)					
190,291	Davis, Augustus B., assignor of one-third interest to J. B. Quirk, Philadelphia, Pa. Coiled spring	May 1, 1877	177	53	11	769
187,360	Davis, Augustus J., Sappington, Mo. Steak-tenderer	Feb. 13, 1877	445	140	11	274
	Davis, Calvin E., *et al.* (*See* Spence, James F., assignor.)					
187,750	Davis, Charles E., Ackley, Iowa. Corn-crib	Feb. 27, 1877	849	265	11	343
186,315	Davis, Charles F., Waltham, Mass. Lifting-jack	Jan. 16, 1877	495	151	11	90
194,334	Davis, Charles O. and F., Portland, Me. Dredging-machine	Aug. 21, 1877	579	173	12	325
186,812	Davis, Daniel, Brooklyn, and A. W. Davis, Flushing, assignors to E. Eldridge, Elmira, N. Y. Vehicle-wheel	Jan. 30, 1877	1117	313	11	179
186,251	Davis, Daniel J., Red Boiling Springs, Tenn. Seed-planter	Jan. 16, 1877	419	128	11	79
186,232	Davis, David W. and S. H., Detroit, Mich. Gill-net	Jan. 16, 1877	420	129	11	80
189,925	Davis, Edgar P. and J. E., and J. Fisk, Crete, Nebr. Corn-stalk press	Apr. 24, 1877	952	291	11	707
191,571	Davis, Edgar P. and J. E., and J. J. Fisk, Crete, Nebr. Machine for pressing corn-stalks, &c., for fuel	June 5, 1877	58	17	11	984
193,693	Davis, Edgar P., assignor to self, J. E. Davis, J. Fisk, and W. V. Morse, Omaha, Nebr. Machine for pressing corn-stalks for fuel	July 31, 1877	1200	359	12	209
197,614	Davis, Edmund T., New York, N. Y. Type-writer	Nov. 27, 1877	940	280	12	922
	Davis, Edward P., *et al.* (*See* Heckmann, Louis, assignor.)					
	Davis, Frances N., *et al.* (*See* Johnson, Henry B., assignor.)					
189,024	Davis, Francis N., Beloit, Wis. Paper-barrel machine	Apr. 3, 1877	15	5	11	560
190,420	Davis, Frank, North Adams, Mass. Weather-strip	May 8, 1877	323	95	11	797
190,561	Davis, Frank, North Adams, assignor of one-half interest to H. B. Ives, East Haven, Conn. Door-bolt	May 8, 1877	460	136	11	814
186,711	Davis, Frank, North Adams, Mass. Weather-strip	Jan. 30, 1877	915	283	11	166
	Davis, Fred. (*See* Davis, Charles O. and F.)					
	Davis, Fremont D. (*See* Wilhelm & Davis.)					
	Davis, George D. (*See* Capel, Charles, assignor.)					
	Davis, George G., *et al.* (*See* McGovern, Peter, assignor.)					
	Same.....(*See* Parkhurst, W. B., assignor.)					
	Same.....(*See* Stone, Joseph M., assignor.)					
	Davis, George L., *et al.* (*See* McGovern, Peter, assignor.)					
	Same.....(*See* Parkhurst, W. B., assignor.)					
	Same.....(*See* Stone, Joseph M., assignor.)					
187,361	Davis, George P., Rochester, N. Y. Adjustable bracket	Feb. 13, 1877	445	140	11	274
186,317	Davis, Henry J. and W. D., Brooklyn, N. Y. Lightning attachment for alarm-clocks	Jan. 16, 1877	496	152	11	90
186,316	Davis, Henry T., Sherman, Tex. Quilting-frame	Jan. 16, 1877	496	152	11	90
190,959	Davis, Horace, assignor of one-half interest to H. Morman, Berlin, Wis. Wrench	May 22, 1877	890	263	11	886
186,120	Davis, Isaac and S. S., Springfield, Mass. Ash-sifter	Jan. 9, 1877	305	93	11	57
193,855	Davis, Isaac, Fitzwilliam, N. H. Cartridge	Aug. 7, 1877	54	17	12	212
186,035	Davis, Isaac B., Hartford, Conn. Car-propeller	Jan. 9, 1877	226	68	11	47
	Davis, James E., *et al.* *See* Davis, Edgar P., assignor.)					
	Same.....(*See* Davis & Fisk.)					
	Davis, James H., *et al.* (*See* McGovern, Peter, assignor.)					
	Davis, James H., *et al.* (*See* Parkhurst, W. B., assignor.)					
	Same.....(*See* Stone, Joseph M., assignor.)					
193,440	Davis, James H., and W. White, Winnsborough, Tex. Valve-gear for steam-engines	July 24, 1877	923	281	12	162
	Davis, John D. (*See* Dickey & Davis.)					
	Davis, John H. (*See* Conrad, Daniel S., assignor.)					
194,296	Davis, John H., Saint Louis, Mo. Weather-strip	Aug. 21, 1877	538	163	12	320
189,023	Davis, Jonathan, Saint Paul, Minn. Tobacco-pipe	Apr. 3, 1877	13	5	11	560
190,960	Davis, Joseph H., Sewickly, Pa. Brush for cleaning boiler-flues	May 22, 1877	891	263	11	886
	Davis, Joseph M. (*See* Cutter, James S., assignor).....(Reissue.)					
186,665	Davis, Levi A. and A. L., Binghamton, N. Y. Wagon-seat fastening	Jan. 30, 1877	869	269	11	160
195,991	Davis, Levi, Wilmington, Kans. Harrow and corn-marker	Oct. 9, 1877	313	88	12	613
190,746	Davis, Louis V., Elkader, Iowa. Grain-separator	May 15, 1877	673	199	11	849
187,219	Davis, Luther M., Joplin, Mo. Beer-cooler	Feb. 13, 1877	301	98	11	255
	Davis, Mary A. (*See* McLennan, Donald, assignor.)					
190,832	Davis, Obadiah, Battle Creek, Mich. Folding-seat for school-desks	May 15, 1877	745	221	11	859
187,108	Davis, Oliver, Gloucester, Mass. Skylight	Feb. 6, 1877	183	60	11	227, 228
190,199	Davis, Oliver W., Waterbury, Vt. Churn	May 1, 1877	86	24	11	757
194,297	Davis, Orson A., Sacramento, Cal. Artificial stone	Aug. 21, 1877	539		12	320
186,811	Davis, Robert B., New York, N. Y. Paper box	Jan. 30, 1877	1007	313	11	179
186,810	Davis, Robert W., assignor to E. Eldridge, Elmira, N. Y. Machine for making metal fellies	Jan. 30, 1877	1006	312	11	178, 179
194,417	Davis, Robert W., Elmira, N. Y. Bread-cutter	Aug. 21, 1877	656	197	12	336
	Davis, Samuel H. (*See* Davis, David W. and S. H.)					
188,503	Davis, Samuel M., Lawrence, Mass. Fishing-trap	Mar. 20, 1877	556	171	11	470
	Davis, S. E., *et al.* (*See* Van Brunt, George W., assignor).....(Reissue.)					
	Davis Sewing-Machine Company. (*See* Rice, T. Marshall, assignor.)					
	Davis, S. K., *et al.* (*See* Shipherd, William C., assignor.)					
	Davis, Spencer E. (*See* Van Brunt & Davis.)					
190,290	Davis, Stephen D., Malvern, Iowa. Wagon-end gate	May 1, 1877	176	53	11	769
	Davis, Sullivan S. (*See* Davis, Isaac and S. S.)					
197,967	Davis, Thomas, Saint Paul, Minn. Globe-valve	Dec. 11, 1877	272	83	12	991

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
187,359	Davis, Thomas I., Fair Haven, N. Y. Brick-machine	Feb. 13, 1877	443	139, 140	11	274
193,490	Davis, Thomas M., Philadelphia, Pa. Incubator	July 24, 1877	970	294, 295	12	168
	Davis, W. W., *et al.* (*See* Fields, Charles C., assignor.)					
	Davis, Walter D. (*See* Davis, Henry J. and W. D.)					
191,119	Davis, William C., assignor to W. C. Davis & Co., Cincinnati, Ohio. Oven and oven-door	May 22, 1877	1011	312	11	906
185,897	Davis, William S., assignor of one-half interest to W. L. Parks, Pittsfield, Me. Harrow	Jan. 2, 1877	84	25	11	19
186,314	Davis, William S., assignor to W. L. Parks, Pittsfield, Me. Clothes-pin	Jan. 16, 1877	495	151	11	90
189,306	Davis, William S., assignor to self and W. L. Parks, Pittsfield, Me. Pump	Apr. 10, 1877	305	96	11	606
194,077	Davis, William S., assignor to W. L. Parks, Pittsfield, Me. Lath-machine and products.	Aug. 14, 1877	295	88	12	281
190,833	Davison, Francis M., Rose Hill, Iowa. Harrow	May 15, 1877	746	221	11	859
195,101	Davidson, Peter, assignor of one-half interest to C. J. Campbell, Wiota, Wis. Pruning-shears	Sept. 11, 1877	359	108	12	457
7,454	Davol, William C., jr., Fall River, Mass. Horse-stall for steam fire-engine houses. (Reissue)	Jan. 2, 1877	187	57	11	33
	Davy, William W. (*See* Clough, George W., assignor.)					
196,789	Dawber, James, Braidwood, Ill. Self-oiling axle-box	Nov. 6, 1877	51	16	12	768
	Dawes, Sons & Co., John L. (*See* Arbogast, Philip, assignor.)					
188,780	Dawes, Alfred, Wakefield, assignor to M. Bray, Newton, Mass. Lacing-stud for boots and shoes	Mar. 27, 1877	841	255	11	517
	Dawes, Daniel C. (*See* Hurcombe, John C., assignor.)					
187,603	Dawes, Joseph, Rochester, N. Y. Artificial leg	Feb. 20, 1877	686	213	11	314
197,344	Dawes, William, Leeds, England. Compound hand or balance wheel for sewing-machines	Nov. 20, 1877	651	192	12	871
	Daws & Fanning. (*See* Brock, William E., assignor.)					
197,615	Dawson, Frank, assignor to C. D. Brewer, Williamsport, Pa. Spring draft-tug	Nov. 27, 1877	944	280	12	922
198,507	Dawson, Noble E., Burlington, Iowa. Phonetic and diacritical notation	Dec. 25, 1877	837	254	12	1091
190,422	Dawson, Patrick C., Providence, R. I. Trumpet for railway-heads and drawing-frames	May 8, 1877	824	95	11	797
193,754	Dawson, Samuel R., Council Bluffs, Iowa. Force-pump	July 31, 1877	1253	376	12	217
190,475	Dawson, William A., assignor of one-half interest to R. D. Burrows, San Francisco, Cal. Sewing-machine	May 8, 1877	380	110, 111	11	804
198,002	Dawson, William W., Madisonville, Tex. Plow	Dec. 11, 1877	303	93	12	998
	Day, Addison. (*See* Le Roy, Tunnis V., assignor) (Reissue.)					
189,706	Day, Alfred, Boston, Mass. Skid for handling boxes	Apr. 17, 1877	709	219	11	667
190,563	Day, Augustus, Detroit, Mich. Railway-track clearer	May 8, 1877	462	137	11	814
192,320	Day, Elias T., Jersey City, N. J., assignor to F. O. Matthiessen, trustee, Irvington, N. Y. Uniting Bessemer metal and increasing the tensile strength thereof	June 19, 1877	845		11	1104
192,904	Day, Thomas H., San Francisco, Cal. Griping device for rope-tramways	July 10, 1877	368	109	12	70
193,931	Day, Timothy R., assignor of two-thirds interest to J. M. McClintock and P. H. Wheat, Devall's Bluff, Ark. Lifting-jack	Aug. 7, 1877	132	40	12	252
194,997	Day, William O., San Francisco, Cal. Graining-machine	Sept. 11, 1877	251	76	12	442
	Dayton Machine Company. (*See* Aldrich, Wales, assignor.)					
194,033	Dayton, Melville E., Chicago, Ill. Metallic sieve	Aug. 14, 1877	252	75	12	276
192,487	Deacon, George F., Liverpool, England. Apparatus for automatically reducing or regulating fluid-pressure	June 26, 1877	1015	307	11	1139
	Deady, Edward. (*See* Collie & Deady.)					
186,715	Deal, Josiah J., Wilmot, Ohio. Gate-latch	Jan. 30, 1877	915	283	11	166
196,639	Dean, Albert H., assignor to Ives, Blakeslee & Mott, Bridgeport, Conn. Automatic smoking advertising device	Oct. 30, 1877	1007	293	12	738
187,521	Dean, Charles C., Sherman, Tex. Rotary churn	Feb. 20, 1877	615	190	11	304
	Dean, Edward C. (*See* Robinson, Walter W. H., assignor.)					
	Dean, Henry C. (*See* Drake, Mahlon S., assignor.)					
	Dean, Hyram. (*See* Mason, Arnold P., assignor.)					
193,230	Dean, Milton, and A. B. Kingsbury, Utica, N. Y.; said Kingsbury assignor to said Dean. Ash-sifter	July 17, 1877	698	213	12	122
	Dean, Otis. (*See* Moffett & Dean.)					
	Dean, Patrick C. (*See* Calhoun, Robert, assignor.)					
7,721	Dean, T. J., Saint Louis, Mo., assignor to L. M. and M. Rumsey. Tube-well (Reissue)	June 5, 1877	220	69	11	1007
193,856	Deardorff, Aaron, J. W. and A. D. Stutzman, Morrisonville, Ill. Bee-hive	Aug. 7, 1877	54	17	12	242
187,825	De Beaumont, Alexandre, assignor of one-half interest to W. H. Palmer, Philadelphia, Pa. Heater and feeder for steam-boilers	Feb. 27, 1877	928	288	11	354
188,106	De Beaumont, Alexandre, Philadelphia, Pa., assignor of one-half interest to W. Rothe, Bernburg, Germany. Screw-propeller	Mar. 6, 1877	137	41	11	399
185,856	De Bernales, Emmanuel J. A., Brooklyn, N. Y. Traction-wheel	Jan. 2, 1877	41	13	11	14
194,135	De Bonald, Guillaume S., Berthier (en Haut), Quebec, Canada. Chair for use in public places	Aug. 14, 1877	374	111	12	290
195,207	De Buigne, Josef F., Vienna, Austria. Roll for beams and girders	Sept. 18, 1877	480	142	12	484
195,806	De Calonne, Alphonse A., Paris, France. Type-case	Oct. 2, 1877	110	33	12	577
195,262	De Castro, José R. V., Oporto, Portugal. Sewing-machine	Sept. 18, 1877	540	157	12	491
	Decker, Alexander C. (*See* McNeill, John, assignor.)					
186,716	Decker, Alexander C., Bushnell, assignor of one-half interest to J. McNeill, Chicago, Ill. Barbed fence-wire	Jan. 30, 1877	916	284	11	166
198,279	Decker, Alonzo T., New York, N. Y. Rear sight for fire-arms	Dec. 18, 1877	608	184	12	1049
189,435	Decker, Edward B., Rockbridge, Ill. Three-horse equalizer	Apr. 10, 1877	429	135	11	622
	Decker, Joel C. (*See* Clements, George S., assignor.)					
	Decker, Marcus A. (*See* Billings & Decker.)					
190,961	Decker, William J., New York, N. Y. Burglar-alarm	May 22, 1877	892	264	11	886
190,423	De Coppet, Francis V., New Orleans, La. Lubrication of ice-machines	May 8, 1877	325	95	11	797
196,339	De Cordova, Gonzalvo, Brooklyn, M. Wise, New York, and H. N. Darrell, Brooklyn, N. Y. Tanning and dyeing leather	Oct. 23, 1877	697		12	683
196,640	Dederick, Ezra, Milwaukee, Wis. Grain-binder	Oct. 30, 1877	1008	293	12	738
7,981	Dederick, Peter K., Albany, N. Y. Hay and cotton press (Reissue)	Dec. 11, 1877	471	148	12	1022
7,982	Same same (Reissue)	Dec. 11, 1877	473	148	12	1023
7,983	Same Baling-press (Reissue)	Dec. 11, 1877	473	149	12	1023
7,984	Same same (Reissue)	Dec. 11, 1877	476	149	12	1023
187,220	Same Hay-press	Feb. 13, 1877	302	98, 99	11	255
197,207	Same Baling-press	Nov. 20, 1877	513	151	12	850
197,208	Deer, Edmund, Annapolis, Ind. Millstone-dress	Nov. 20, 1877	514	152	12	850
	Deere & Co. (*See* Moore, Gilpin, assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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194,335	Deering, Mark L., assignor of one-half interest to G. H. Hopper, Cleveland, Ohio. Barrel trussing and hooping machine	Aug. 21, 1877	580	174	12	325
	Deering, Sylvester H. (*See* Chandler & Deering.)					
	Deering, William. (*See* Gammon, Dixon & Steward, assignors.)					
	Deering, William, *et al.* (*See* Coddington & Kennedy, assignors.)					
	Same.....(*See* Steward, John F., assignor.)					
187,522	Deetz, William, Saltille, Ohio. Straw-stacker	Feb. 20, 1877	616	191	11	304
190,292	Deey, Edward M., New York, N. Y. Locking device for bottles	May 1, 1877	178	53	11	769
196,641	Defenbaugh, Lewis, Kokomo, Ind. Corn-planter	Oct. 30, 1877	1010	293	12	738
195,263	De Force, Samuel A., Creckett, Tex. Ditching and excavating machine	Sept. 18, 1877	542	157, 158	12	492
	De Forest, Carrie B. (*See* Tremain, Charles W., assignor.)					
188,237	De Forest, David W., assignor of one-half interest to W. Spence, Brooklyn, N. Y. Cigarette-machine	Mar. 13, 1877	284	89	11	424
191,841	De Forest, David W., Brooklyn, assignor to Buchanan & Lyall, New York, N. Y. Printing or embossing plug-tobacco	June 12, 1877	326	101	11	1025
197,722	De Forest, David W., Brooklyn, N. Y. Manufacture of plug-tobacco	Dec. 4, 1877	15	5	12	948
	De Forest, Harry S. (*See* Van Slyck & De Forest.)					
	De Forest, Sarah A. (*See* De Forest, Thomas B., assignor).....(Reissue.)					
7,567	De Forest, Thomas B., Birmingham, Conn., assignor to S. A. De Forest. Socket for agricultural implements.....(Reissue)	Mar. 27, 1877	1000	326	11	548
	De Gaetano, Stephen. (*See* Provenzano & De Gaetano.)					
	Degnen, John F., *et al.* (*See* Taylor & McCamish, assignors.)					
192,978	De Gray, Richard, New Orleans, La. Bale-tie	July 10, 1877	437	131	12	80
191,002	Deguine, Casimir, Boulogne-sur-Mer, France. Furnace-grate	May 22, 1877	933	276	11	891
192,488	De Guise, Joseph B., Detroit, Mich. Inhaler	June 26, 1877	1018	308	11	1139
	De Haven, Eliza G., *et al.* (*See* De Haven, Rhoads, assignor.)					
194,897	De Haven, James W., Kokomo, Ind. Water-wheel	Sept. 4, 1877	139	44	12	419
189,033	De Haven, Rheads, assignor, by mesne assignments, to E. G. De Haven and E. L. Thomas, Rochester, N. Y. Slate-washer	Apr. 3, 1877	22	7	11	562
191,842	Deisz, Francis J., Pierce City, Mo. Combined snap-hook and buckle	June 12, 1877	327	101	11	1025
194,998	Deiterich, Charles F., Baltimore, Md. Machinery for charging gas-retorts	Sept. 11, 1877	252	76	12	442
187,808	Deitz, Alanson F., Guilderland Centre, N. Y. Bale-tie	Aug. 7, 1877	12	4	12	236
	Deitzler, George W. (*See* Hittell & Deitzler.)					
	Dejonge & Co., Louis. (*See* Wiener, Max, assignor.)					
197,555	De La Baquera, Carlos, New York, N. Y. Machine for extracting fibers from pita	Nov. 27, 1877	881	262	12	913
190,834	De la Martelliere, Alfred C., Paris, France. Fire-proof metallic roofing	May 15, 1877	746		11	860
	Delamater, Cornelius H., *et al.* (*See* Reynolds, George H., assignor.)					
	Delamater, Cornelius H. (*See* Reynolds, George H., assignor).....(Reissue.)					
188,061	De Lalande, Felix, Paris, France. Obtaining artificial purpurine alizarine	Mar. 8, 1877	101		11	394
190,476	De Landtsheer, Norbert, assignor to C. Couture, Paris, France. Machine for treating flax, hemp, &c	May 8, 1877	381	111	11	804
191,034	Delaney, Thomas H., Angelica, Wis. Machine for sawing shingles	May 22, 1877	965	286	11	896
196,340	Delano, Ezekiel, Greenwich, Conn. Addressing-machine	Oct. 23, 1877	698	201	12	683
191,941	Delano, Howard, Syracuse, assignor to self and R. Dewey, Otto, N. Y. Fence-post	June 12, 1877	422	130	11	1037
187,459	Delano, John W., Marion, and L. C. Norton, Auburndale, Mass. Shutter-worker	Feb. 20, 1877	556	172	11	296
192,418	De Lany, William, Cobourg, Canada. Lamp-post	June 26, 1877	956	286	11	1131
195,208	De Larie, Louis, Allentown, Pa. Spike-pointing machine	Sept. 18, 1877	481	142	12	484
	Delaugre, Laurent. (*See* Roussel, Delaugre & Robin).....(Reissue.)					
197,482	De La Vergne, John C., Jersey City, N. J., and E. M. Davies, New York, N. Y. Ice-floor for refrigerator buildings	Nov. 27, 1877	800	239	12	902
188,601	Delkescamp, Adolph, assignor to J. Hendtfelder, New York, N. Y. Shears and scissors	Mar. 20, 1877	643	199	11	483
188,781	Delkescamp, Adolph, New York, N. Y. Padlock	Mar. 27, 1877	842	255	11	517
	De Lousada, Francis C., *et al.* (*See* Casper, Edward, assignor.)					
197,723	Demarest, Cornelius B., Brooklyn, N. Y. Opera-chair	Dec. 4, 1877	16	5	12	948
195,705	Demarest, John, New York, N. Y. Water-closet	Oct. 2, 1877	14	4	12	563
	Deming, John W. (*See* Deming, Lucius and J. W.)					
	Deming, Louis B., *et al.* (*See* Lamb, James C., assignor.)					
198,191	Deming, Lucius, assignor of one-half interest to C. H. Allen, Saint Louis, Mo. Horse-collar attachment	Dec. 18, 1877	509	157	12	1035
198,578	Deming, Lucius and J. W., assignors of one-third interest to C. H. Allen, Saint Louis, Mo. Blank for horse-collars	Dec. 25, 1877	897	274	12	1101
191,120	Deming, Philander, Albany, N. Y. Type-writer	May 22, 1877	1042	312	11	907
193,642	Same.....Ink-ribbon chamber for type-writers	July 31, 1877	1149	344	12	202
197,833	Same.....Sound-deadening case for type-writers	Dec. 4, 1877	127	39	12	964
191,520	Demond, George W. and L., Brooklyn, N. Y. Ash-sifter	June 5, 1877	10	3	11	978
	Demond, Louis. (*See* Demond, George W. and L.)					
186,992	Demorest, E. Louise, and T. W. G. Cook, assignors to W. J. Demorest, New York, N. Y. Stocking-supporter	Feb. 6, 1877	79	27	11	212
	Demorest, W. Jennings. (*See* Demorest & Cook, assignors.)					
187,604	Dempster, Hiram V., Washington, D. C., assignor, by mesne assignment, to A. C. Mason, Galesburg, Ill. Ribbon-protector	F b. 20, 1877	688	214	11	314
	Demuth & Co., William. (*See* Havell, George, assignor.)					
	Demuth, Theodore, *et al.* (*See* Chittenden, Morgan, assignor.)					
188,868	Denholm, Robert, Cleveland, Ohio. Horseshoe-calk sharpener	Mar. 27, 1877	929	282	11	529
	Denio, Asa O. (*See* Conner, William, assignor.)					
192,744	Denio, Asa O., Wilmington, Del. Grate-bar	July 3, 1877	184	53	12	38
189,847	Denison, Adna T., Mechanics Falls, Me. Feed-water heater for boilers	Apr. 24, 1877	873	267	11	697
197,345	Denison, Charles H., Bay City, Mich. Index	Nov. 20, 1877	652	192, 193	12	871
	Denison, George A., *et al.* (*See* Buckingham, Joseph P., assignor.)					
193,932	Denison, George A., assignor to self and J. P. Buckingham, Chicopee, and O. M. Hamilton, Springfield, Mass. Paper box	Aug. 7, 1877	133	41	12	253
186,318	Denmark, Rufus, Washington Corners, Cal. Belt-shipping attachment for pulleys	Jan. 16, 1877	498	152	11	90
197,346	Denneler, Charles, Philadelphia, Pa. Cloak	Nov. 20, 1877	653	193	12	871
191,844	Dennett, Alpheus A., New Britain, Conn. Door-bolt	June 12, 1877	328	102	11	1025
7,749	Dennett, Charles N., Salisbury, Mass. Shifting-seat carriage	June 19, 1877	847	256	11	1104
189,707	Denney, Mifflin P., Gap, Pa. Horse hay-rake	Apr. 17, 1877	709	219	11	667
187,343	Denney, Samuel L., Gap, Pa. Washing-machine	Apr. 10, 1877	339	109	11	611
192,238	Denney, William H., Philadelphia, Pa. Cigar-case	June 19, 1877	747	228	11	1092
	Dennis, Joseph S. (*See* Syversen, Andreas, assignor.)					
195,706	Dennis, Joseph S., and L. F. Betts, Chicago, Ill. Shipping-can	Oct. 2, 1877	15	4	12	563
195,102	Dennis, Samuel W., San Francisco, Cal. Pneumatic dental mallet	Sept. 11, 1877	359	109	12	458

Alphabetical list of patentees for the year 1877.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.		
			Spec.	Dr'g.	Vol.	Page.	
189,342	Dennison, Albert S., Watertown, N. Y. Paper bag	Apr. 10, 1877	339	108	11	610	
191,943	Dennison, Albert S., Watertown, N. Y. Paper-bag machine	June 12, 1877	424	131	11	1037	
196,565	Dennison, Ezra F., San Francisco, Cal. Dredging-machine	Oct. 30, 1877	938	271	12	728	
	Dennison, John. (*See* Jay & Dennison.)						
194,336	Denniston, Samuel M., and C. Simmons, Prescott, Ariz. Stop-cock	Aug. 21, 1877	582	174	12	326	
198,579	Same.....Stop-cock attachment	Dec. 25, 1877	898	274	12	1101	
193,147	De Nottbeck, Gabrielle, New York, N. Y. Canal locomotive	July 17, 1877	611	185	12	111	
188,867	Denny, Hervey B., assignor of one-half interest to H. W. Ruth, Circleville, Ohio. Grate-bar	Mar. 27, 1877	928	282	11	529	
195,584	Densmore, Amos, Meadville, Pa. Heat-conducting media	Sept. 25, 1877	852		12	545	
	Densmore, James. (*See* Ashcroft, Edward H., assignor)	(Reissue.)					
	Densmore, James. (*See* Converse, Charles C., assignor)	(Reissue.)					
190,672	Densmore, Jay, Tonawanda, N. Y. Plow-jointer	May 15, 1877	598	177	11	840	
196,566	Densmore, Joseph G., West Dresden, Me. Ferry-boat	Oct. 30, 1877	940	271	12	728	
188,107	Densmore, Lyman W., Saint Joseph, Mo. Truss-bridge	Mar. 6, 1877	137	41	11	399	
	Denton, Caroline L., executrix. (*See* Denton, Charles.)						
194,898	Denton, Charles, deceased, Pekin, and C. L. Denton, executrix and assignor to A. J. Hodges, Peoria, Ill. Harvester-reel adjustment	Sept. 4, 1877	140	44	12	420	
7,722	De Quillfeldt, Charles, assignor to K. Hutter, New York, N. Y. Bottle-stopper	(Reissue)	June 5, 1877	221	70	11	1007
195,807	De Quindre, Julia, Detroit, Mich. Trunk	Oct. 2, 1877	111	33	12	577	
193,441	Deraismes, Hippolite A., Elizabeth, N. J. Baggage-check	July 24, 1877	924	281	12	162	
192,155	Derkum, Peter, Richmond, Ind. Device for transmitting motion	June 19, 1877	663	203	11	1080	
196,141	Dernell, Herman F., Athens, N. Y. Adjustable switch for ice-runs	Oct. 16, 1877	486	141	12	645	
198,580	Derr, John P., Mercer, Pa. Thorough-brace bridge	Dec. 25, 1877	898	275	12	1101	
192,489	Descomtes, Bathilde M., Paris, France. Camp-chest	June 26, 1877	1019	308	11	1139	
	Deshon, Francis. (*See* Collins, Charles H., assignor.)						
196,881	Designolle, Paul G. L. G., Paris, France. Treatment of mineral phosphates	Nov. 6, 1877	152		12	781	
197,834	Same.....Artificial animal black	Dec. 4, 1877	128		12	964	
194,808	Despoix, Francois, and J. Reboul, San Francisco, Cal. Floating-bath structure	Sept. 4, 1877	54	18	12	407	
	Dessart, Charles H. (*See* Siller & Dessart.)						
187,971	D'Estampes, Abel, New Orleans, assignor of part of interest to P. Leonard, parish of Plaquemines, Louisiana. Artificial kaolin	Mar. 6, 1877	16		11	333	
7,609	Destouy, Auguste, deceased, M. H. Destouy, administratrix and assignor to H. Miller, New York, N. Y. Molding sheet-metal	(Reissue)	Apr. 17, 1877	838	259	11	683
	Destouy, Marie H., administratrix. (*See* Destouy, Auguste)	(Reissue.)					
	Detroit Iron and Brass Manufacturing Company. (*See* Lambert, James T., assignor.)						
	Same.....(*See* Scully, William, assignor.)						
	Same.....same	(Reissue.)					
198,085	Dette, Wilhelm, Berlin, Prussia, assignor to B. B. Schneider, New York, N. Y. Petroleum lamp	Dec. 11, 1877	378	119	12	1010	
196,520	Detwiler, Emanuel, Milwaukie, Wis. Cigar-bundler	Oct. 30, 1877	893	258	12	721	
188,783	Detwiler, John S., Philadelphia, Pa. Grinding-mill	Mar. 27, 1877	844	256	11	517	
193,933	Same.....Flour-bolt	Aug. 7, 1877	134	41	12	253	
191,843	Detwiller, Jacob J., Jersey City, N. J. Pyrotechnic signal-cartridge	June 12, 1877	327	101	11	1025	
193,599	Same.....Toy balloon	July 31, 1877	1101	330	12	196	
187,221	Deusner, Philip, jr., Kokomo, Ind. Ticket-book	Feb. 13, 1877	303	99	11	255, 256	
187,826	Deutsch, Sigmund, Philadelphia, Pa. Pantaloons	Feb. 27, 1877	929	288	11	354	
198,451	Deutsch, William M., Elizabeth, N. J. Tubular belting	Dec. 25, 1877	782	237	12	1084	
191,845	De Veara, Manuel N., Springfield, Ill. Seed-planter	June 12, 1877	329	102	11	1025	
191,003	De Veaux, Samuel, and J. Rosser, La Fayette, Ind.; said De Veaux assignor to said Rosser. Check-rower and corn-drill	May 22, 1877	934	276	11	891	
196,341	De Veaux, Samuel, La Fayette, assignor of one-half interest to G. W. Rice, Battle Ground, Ind. Check-row attachment for planters	Oct. 23, 1877	699	201	12	683	
194,512	Dever, Edward M., Peoria, Ill. Sash-holder	Aug. 28, 1877	767	228	12	359	
	Devereux, Newton. (*See* Higgins & Devereux.)						
186,233	Devling, James W., assignor to G. W. Batchelor and J. B. Furst, Lock Haven, Pa. Lime-kiln	Jan. 16, 1877	421	129	11	80	
188,869	Devoe, Benjamin G., assignor of two-thirds interest to E. Parkinson and W. W. McLean, Kenton, Ohio. Heater	Mar. 27, 1877	930	283	11	530	
197,019	Devoe, James R., assignor of one-half interest to A. S. and D. Zook, Goshen, Ind. Attachment for pumps	Nov. 13, 1877	298	88	12	811	
196,077	De Vries, Jelle A., assignor of one-half interest to A. Kruidenier, Pella, Iowa. Jeweler's lathe	Oct. 16, 1877	411	119	12	635	
7,666	Dewe, John, Ottawa, Canada. Seal-lock	(Reissue)	May 8, 1877	575	171	11	829
192,057	Dewey, Charles P., and R. P. Scott, Cadiz, Ohio. Ice-creeper	June 19, 1877	564	171	11	1068	
198,536	Dewey, Henry E., assignor of one-half interest to H. A. Burch, South Haven, Mich. Coin-holder	Dec. 25, 1877	862	263	12	1095	
	Dewey, Ralph. (*See* Delano, Howard, assignor.)						
191,044	Dewey, Ralph, Otto, N. Y. Fence-post	June 12, 1877	425	131	11	1037	
191,660	Dewey, Willie E., Elkhorn, Wis. Cultivator	June 5, 1877	142	44	11	995	
192,842	De Wieczfinski-Serres, Auguste, Paris, France. Railway-track	July 10, 1877	313	92	12	63	
190,014	De Witt, Henry C., Chicago, Ill. Automatic hose-reel	Apr. 24, 1877	1045	319	11	709	
	De Wolf, Darwin. (*See* Dowling & Perry, assignors.)						
195,707	Dewrance, John, 176 Great Dover Street Borough, and J. Mallinson, Welwyn, England. Cock	Oct. 2, 1877	16	5	12	563	
190,013	Dewye, John J., Red Wing, Minn. Harvester-reel	Apr. 24, 1877	1045	318	11	719	
186,234	Dexter, James E., New York, N. Y. Electro-magnetic dental plugger	Jan. 16, 1877	421	129	11	80	
188,602	Dexter, Norman, Finleyville, Pa. Dotaching horses	Mar. 20, 1877	644	199	11	483	
192,684	Dexter, Oliver, jr., Troy, N. Y. Ice-cream freezer	July 3, 1877	137	38	12	31	
7,723	Dexter, Parker, Clinton, Iowa, assignor to C. S. and S. Burt. Machine for pressing and bunching shingles	(Reissue)	June 5, 1877	223	70	11	1007
198,003	Dexter, Thomas B., Lynn, Mass. Gas-burner	Dec. 11, 1877	304	93	12	998	
198,280	Dezendorf, Frederick, Cornwall-on-Hudson, N. Y. Bit-clamp for boring-machines	Dec. 18, 1877	609	184	12	1049	
190,293	D'Heureuse, Julius, Schmetzdorf, Prussia, assignor to R. Heureuse, New York, N. Y. Apparatus for distributing liquid manure	May 1, 1877	178	53	11	769	
	D'Heureuse, R. (*See* D'Heureuse, Julius, assignor.)						
191,942	D'Heureuse, Rudolph, New York, N. Y. Preparing mash	June 12, 1877	423		11	1037	
198,192	Same.....Process and apparatus for disintegrating cereals	Dec. 18, 1877	509	157	12	1035	
186,082	Diall, Martin N., Terre Haute, Ind. Process of preparing gas-fuel	Jan. 9, 1877	270		11	53	
197,767	Diamant, Abraham L., and C. H. Tobias, Cincinnati, Ohio. Hat	Dec. 4, 1877	63	20	12	955	
192,863	Dibble, William H., Elizabeth, N. J. Making composition articles	July 10, 1877	332		12	65	
	Dick & Church. (*See* Simpson, John, assignor)	(Reissue.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Drgs.	Official Gazette. Vol.	Official Gazette. Page.
195,209	Dick, Alexander, Buffalo, N. Y. Addressing-machine	Sept. 18, 1877	482	143	12	484
193,694	Dick, Charles J. A., Philadelphia, Pa. Air-spring	July 31, 1877	1200	359	12	209
188,782	Dickenson, Charles, Portland, Oreg. Life-boat	Mar. 27, 1877	843	256	11	517
	Dickenson, Charles B. (*See* Kennish, William, assignor.)					
	Dickerman, Elmer W. (*See* Rice, Walter H., assignor.)					
192,745	Dickerson, Lorenzo, Trenton, Mich. Gate	July 3, 1877	185	53	12	38
7,763	Dickerson, Edward W., New York, N. Y. Valve-gear of steam-engines (Reissue)	June 26, 1877	1091	331	11	1149
195,445	Dickerson, Samuel H., Hudson, Mich. Chimney-cleaner	Sept. 25, 1877	721	213	12	526
189,613	Dicey, Elmer C., Grand Haven, Mich. Lath-machine	Apr. 17, 1877	619	191	11	655
197,400	Dicey, Elmer C., assignor of one-half interest to H. C. Albee, Sterling, Ill. Spring-coiling machine	Nov. 27, 1877	780	233	12	899
187,827	Dickey, Adam, Middletown, Ohio. Fruit-jar	Feb. 27, 1877	930	268	11	354
	Dickey, Andrew, *et al.* (*See* Williams, Absalem C., assignor.)					
	Dickey, John P., *et al.* (*See* Shurtz, John G., assignor.)					
192,619	Dickey, Julius C., Franklin, Pa. Coupling for oil-well tubing	July 3, 1877	66	19	12	21
193,103	Dickey, Samuel H., and J. D. Davis, Oxford, Pa. Iron fence	Sept. 11, 1877	361	109	12	458
196,567	Dickinson, Alfred S., New York, N. Y. Curtain-cord holder	Oct. 30, 1877	941	272	12	728
188,603	Dickinson, Elijah M., Fitchburg, Mass. Machine for forming and leveling the bottoms of boots and shoes	Mar. 20, 1877	644	199	11	483
195,264	Dickinson, John R., Ida, Mich. Draft-equalizing device for horse-powers	Sept. 18, 1877	543	158	12	492
186,463	Dickinson, Otis S., Granville Corners, Mass. Flooring	Jan. 23, 1877	675	207	11	124
194,136	Dickinson, Robert, Darlington Court-House, S. C. Cotton-gin	Aug. 14, 1877	374	111	12	291
196,972	Dickinson, Thomas, Buffalo, N. Y. Device for illuminating clock-dials, signs, &c.	Nov. 13, 1877	253	75	12	804
186,925	Dicks, William, Clifton, Canada. Wrench	Feb. 6, 1877	5	2	11	303
186,926	Same. Nut-lock	Feb. 6, 1877	7	2	11	204
187,968	Dickson, George A., Shortsville, N. Y. Hay-elevator	Mar. 6, 1877	12	3, 4	11	382
187,969	Same. Hay-elevating device	Mar. 6, 1877	13	4	11	382
190,132	Dicksen, Henry, Pittsburg, Pa., assignor to self and W. S. Colwell. Brick-kiln	May 1, 1877	20	5	11	749
195,585	Dieckmann, Ferdinand, Cincinnati, Ohio. Gas-engine	Sept. 25, 1877	853	253, 254	12	545
193,857	Diem, John G., Saint Francisville, La. Water cut-off	Aug. 7, 1877	55	18	12	242
197,546	Diemer, Peter, assignor of one-half interest to J. Stanley, Cleveland, Ohio. Track-clearer for street-railways	Nov. 27, 1877	872	259	12	912
	Dieterlea, Henry. (*See* Artley, Berg & Dieterlea.)					
196,882	Dietz, Augustus, Philadelphia, Pa. Apparatus for mixing plastic composition	Nov. 6, 1877	154	45	12	781
198,339	Same. Cart for heating and conveying plastic composition	Dec. 18, 1877	676	206	12	1059
	Dietz, Frederick. (*See* Sherwood, Daniel, assignor.)					
186,319	Dietz, Robert E., New York, N. Y. Door-retainer	Jan. 16, 1877	498	152	11	90
	Dietzen, Jacob. (*See* Seivert, Dietzen & Streetzel.)					
187,460	Dibel, John J., Washington, Iowa. Plow attachment for potato-diggers	Feb. 20, 1877	557	172	11	296
187,362	Dilg, Henry W., assignor to self, H. C. Paige, and E. Merril, Portland, Oreg. Shackle.	Feb. 13, 1877	446	140	11	274
197,835	Dill, Joseph, Boston, Mass. Dovetailing and grooving machine	Dec. 4, 1877	130	39	12	964
7,773	Dillen, Jonathan, Kane City, Pa., assignor to J. Eaton and E. H. Cole. Safety derrick-lamp (Reissue)	July 3, 1877	263	77	12	47
7,930	Dillon, John, New York, N. Y. Fire-extinguisher (Reissue)	Oct. 30, 1877	1103	321	12	751
192,639	Dillon, John C., Amherst, Mass. Chain-coupling	July 3, 1877	87	26	12	24
7,901	Dillon, Peter, and J. Cleary, Sherbrooke, Canada, assignors of one-third interest to G. H. Bradford. Soldering-machine (Reissue)	Oct. 2, 1877	188	53, 54	12	588
186,813	Dillon, Peter, and J. Cleary, assignors to G. H. Bradford, Sherbrooke, Canada. Soldering-machine	Jan. 30, 1877	1009	313	11	179
7,656	Dimes, Richard, assignor to Tiffany & Co., New York, N. Y. Processes and apparatus for stippling metallic surfaces (Reissue)	May 1, 1877	306	89	11	786
7,657	Same. Process and apparatus for stippling metallic surfaces (Reissue)	May 1, 1877	307	89	11	786
7,658	Same. same (Reissue)	May 1, 1877	307	90	11	786
186,320	Dimmick, Jacob K., assignor to self and F. A. Stine, Cincinnati, Ohio. Fire-place heater	Jan. 16, 1877	499	153	11	91
190,835	Dimmick, Jacob K., assignor of one-fourth interest to F. A. Stine, Newport, Ky. Molding and casting pipe	May 15, 1877	747	221	11	860
195,104	Dimmick, Jacob K., and F. A. Stine, Cincinnati, Ohio. Fire-place stove	Sept. 11, 1877	362	109	12	458
194,137	Dimmock, George M., Springfield, Mass. Writing-tablet	Aug. 14, 1877	375	111	12	291
196,198	Dimond, George H., Bridgeport, Conn., assignor to Wheeler & Wilson Manufacturing Company. Gathering device for sewing-machines	Oct. 16, 1877	539	156	12	652
187,257	Dimond, John G., Oxford, Mass. Machine for grinding awl-blanks	Feb. 13, 1877	339	108	11	260
195,586	Dingee, William W., assignor to Sawyer Manufacturing Company, Oshkosh, Wis. Thrashing-machine	Sept. 25, 1877	857	254, 255	12	545
	Dinnan, John J. (*See* O'Connor & Dinnan.)					
189,198	Dinsmore, Samuel B., Richmond, Me. Flat-iron heater	Apr. 3, 1877	163	57	11	581
191,319	Dion, Charles, Chambly Basin, Quebec, assignor of one-twentieth interest to R. A. R. Hubert, Montreal, Canada. Stove	May 29, 1877	1246	375	11	943
192,239	Dion, Charles, Chambly Basin, assignor of one-half interest to J. Baylis, Montreal, Canada. Apparatus for tempering and converting iron	June 19, 1877	747	229	11	1092
192,325	Dippert, William, Des Moines, Iowa. Horse-collar pad	June 26, 1877	866	262	11	1119
197,724	Dippert, William E., assignor of one-half interest to T. G. Orwig, Des Moines, Iowa. Trace-carrier	Dec. 4, 1877	17	5	12	949
7,541	Dirkes, Henry A., New York, N. Y. Table-caster (Reissue)	Feb. 27, 1877	1068	329	11	372
190,962	Dirks, Rudolph, Marlborough, Montgomery County, Pa. Mower	May 22, 1877	892	264	11	886
189,086	Disman, George W., Lima, Ohio. Car-heater	Apr. 3, 1877	67	24, 25	11	568
	Disston & Sons, Henry. (*See* Bevan, Samuel, assignor) (Reissue.)					
	Same. (*See* Disston, Thomas S., assignor.)					
	Disston, Albert H., *et al.* (*See* Disston, Thomas S., assignor.)					
	Same. (*See* Disston & Vandegrift, assignors.)					
186,814	Disston, Charles, Philadelphia, Pa. Hand-saw	Jan. 30, 1877	1010	314	11	179
	Disston, Hamilton, *et al.* (*See* Disston, Thomas S., assignor.)					
	Same. (*See* Disston & Vandegrift, assignors.)					
	Disston, Henry, *et al.* (*See* Disston, Thomas S., assignor.)					
	Same. (*See* Disston & Vandegrift, assignors.)					
192,240	Disston, Henry, Philadelphia, Pa. Circular saw	June 19, 1877	751	229	11	1092
194,659	Disston, Henry, and J. H. Vandegrift, assignors to H., H., and A. H. Disston, Philadelphia, Pa. Saw-handle	Aug. 28, 1877	895	267	12	378
	Disston, Horace C., *et al.* (*See* Disston, Thomas S., assignor.)					
188,108	Disston, Thomas S., Philadelphia, Pa. Blowing-machine	Mar. 6, 1877	139	41	11	399
188,604	Disston, Thomas S., assignor of one-half interest to H. Disston & Sons, Philadelphia, Pa. Combined pruning shears and saw	Mar. 20, 1877	645	199	11	483

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Date.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
189,199	Disston, Thomas S., assignor to H., H., A. H., and H. C., Philadelphia, Pa. Insertable saw-teeth	Apr. 3, 1877	163	57	11	581
191,320	Disston, Thomas S., assignor to H. Disston & Sons, Philadelphia, Pa. Post-hole digger	May 29, 1877	1247	375	11	943
193,231	Distelrath, Henry, Columbus, Ohio. Gage-cock	July 17, 1877	699	214	12	123
196,114	Distler, George, Cypress Hills, N. Y. Parlor game-board	Oct. 16, 1877	456	133	12	641
191,572	Distler, John G., Brooklyn, N. Y. Fire-kindler	June 5, 1877	59	18	11	984
	Dithridge & Co. (*See* Atterbury, James S. and T. B., assignors.)					(Reissue.)
	Same (*See* Burgon, Joseph, assignor.)					
	Same (*See* Buttlear, William, assignor.)					
190,747	Dit Lepine, Norbert B., assignor to W. Hammond, Wayland, Mass. Awl-haft	May 15, 1877	674	200	11	849
191,121	Dittmar, Justus, Williamsport, Pa. Dip-pipe for gas apparatus	May 22, 1877	1043	212	11	907
188,504	Divert, Joseph C., New Haven, Mo. Feather-renovator	Mar. 20, 1877	557	171	11	470
186,321	Divine, Thomas, Charleston, S. C. Bottle for hair-dye	Jan. 16, 1877	500	153	11	91
194,078	Divoll, James G., Sonora, Cal. Toilet-mirror	Aug. 14, 1877	296	88	12	281
196,883	Divver, Robert, E. C., Memphis, Tenn. Warming-stove	Nov. 6, 1877	155	45	12	782
187,363	Dixon, Franklin M., Philadelphia, Pa. Table-fork for green corn, &c	Feb. 13, 1877	447	141	11	275
193,600	Dixon, George W., Spring Lake, assignor to W. M. Ferry, Grand Haven, Mich. Valve for direct-acting pumps	July 31, 1877	1102	330	12	196
	Dixon, Hiram R. (*See* Cornell, Leffert R., assignor.)					
187,751	Dixon, John W., Philadelphia, Pa., Apparatus for recovering waste alkalies	Feb. 27, 1877	850	265	11	344
	Dixon, Robert H. (*See* Gammon, Dixon & Steward.)					
193,934	Dixon, William M., assignor to Parkinson, Long & McKinney, Riceville, Tenn, Evaporating-pan	Aug. 7, 1877	136	41	12	253
191,045	Dixson, Stephen, Roseville, Ill. Seeding-machine	June 12, 1877	425	131	11	1037
191,046	Same same	June 12, 1877	426	131	11	1037
	Doan, William H, (*See* Tully, Thomas, assignor.)					
190,564	Doane, Charles R., Brooklyn, N. Y. Machine for putting up sedlitz-powders	May 8, 1877	463	137, 138	11	815
	Doane, Henry. (*See* Pflum, Harry P., assignor.)					
194,225	Doane, William H., and G. W. Bugbee, assignors to J. A. Fay & Co., Cincinnati, Ohio. Band-saw mill	Aug. 14, 1877	451	137, 138	12	302
	Dobbins, David P. (*See* Cole, Benjamin, assignor.)					
191,122	Dobbs, Charles, and S. L. Robinson, Millwood, Tex. Car-coupling	May 22, 1877	1044	313	11	907
190,836	Dobbs, John, Victor, Iowa. Barbed fence-wire	May 15, 1877	748	222	11	860
	Dobbs, Seneca. (*See* Fickett, Albert, assignor.)					
190,424	Dobbs, Thomas S., Lexington, Ohio. Agricultural boiler	May 8, 1877	326	96	11	797
	Dobson, James L. (*See* Fawcett, Rufus H., assignor.)					
189,087	Dock, Jonathan F., Elkhart, Ind. Clearing attachment for plows	Apr. 3, 1877	68	25	11	568
195,919	Dockstader, Adam B., Sherman, assignor to self and W. D. Blackman, McKinney, Tex. Ballast-distributing car	Oct. 9, 1877	236	68	12	602
	Dockstader, Jacob H. (*See* Sanson, Herman, assignor.)					
192,156	Dodd, Alvin H., New York, N. Y. Clasp for holding neck-tie	June 19, 1877	664	203	11	1081
197,837	Dodd, William, assignor to C. Harrison, New York, N. Y. Compression-cock	Dec. 4, 1877	132	40	12	964
195,808	Doddridge, Loyal M., New Mount Pleasant, Ind. Snap-hook	Oct. 2, 1877	113	33	12	577
	Dodds, John, *et al.* (*See* Ritty, Sebastian, assignor.)					
195,210	Dodge, Chester O., Colebrook, Ohio. Adjustable handle for rolling barrels, &c	Sept. 18, 1877	484	143	12	484
195,105	Dodge, Cyrus A., Muncie, Ind. Washing-machine	Sept. 11, 1877	363	109	12	458
195,106	Dodge, Cyrus A., Chicago, Ill. Washing-machine	Sept. 11, 1877	364	110	12	459
192,326	Dodge, D. Franklin, Lowville, N. Y. Barrel-cover	June 26, 1877	868	262	11	1119
194,337	Dodge, D. Frank, Lowville, N. Y. Pump-valve	Aug. 21, 1877	583	174	12	326
197,836	Dodge, Henry, Washington Mills, N. Y. Milk-pail	Dec. 4, 1877	131	39	12	964
188,605	Dodge, John A., Bridgetown, Nova Scotia. Wrench	Mar. 20, 1877	646	200	11	483
191,573	Same Skate	June 5, 1877	59	8	11	984
	Dodge, John R., jr., *et al.* (*See* Griffith, Samuel R., assignor.)					
190,748	Dodge, John R., jr, assignor of one-half interest to W. T. Shurtleff, Normal, Ill. Fruit-drier	May 15, 1877	675	200	11	849
191,661	Same Composition for preserving, drying, and bleaching fruit	June 5, 1877	143		11	995
192,573	Dodge, J. Wesley, Malden, Mass. Burnishing-machine for boots and shoes	July 3, 1877	17	5	12	15
196,342	Dodge, William E., jr., New York, N. Y. Fire-screen	Oct. 23, 1877	700	201	12	693
187,828	Dodgeworth, Samuel, Leavenworth, Kans. Kerosene-lamp	Feb. 27, 1877	931	289	11	354
186,036	Doebert, Ferdinand, Buffalo, N. Y. Meat-chopping machine	Jan. 9, 1877	227	68	11	47
	Doerflinger, August. (*See* Striedinger & Doerflinger.)					
192,241	Doherty, Patrick, Philadelphia, Pa. Coin-detector	June 19, 1877	751	230	11	1092
	Dohnstreich, F. Louis. (*See* Jakel, John, assignor.)					
189,708	Doisy, Jean F. R., and H. L. E. Sarrazin, Paris, France. Boot-jack	Apr. 17, 1877	710	219	11	667
188,871	Dolan, John H., Geneseo, Ill. Harrow	Mar. 27, 1877	932	283	11	530
	Dolan, Thomas, *et al.* (*See* Fearon, Francis, assignor.)					
190,565	Dole, John, assignor to self and H. H. Fogg, Bangor, Me. Machine for making wooden gutters	May 8, 1877	465	138	11	815
195,587	Doll, Frederick, assignor to W. H. Hall, Newark, N. J. Bottle-stopper	Sept. 25, 1877	858	255	12	545
195,107	Doilner, Charles F., Philadelphia, Pa. Umbrella-handle	Sept. 11, 1877	366	110	12	459
188,870	Dolman, Edward, Westville, Ind. Middlings-separator	Mar. 27, 1877	931	283	11	530
197,768	Dolsen, William B., and J. B. Sherwood, Moberly, Mo. Sad-iron	Dec. 4, 1877	63	21	12	955
	Domestic Telegraph Company. (*See* Edison, Thomas A., assignor.)					
198,193	Domschke, Charles, Austin, Tex. Gang-plow and cultivator	Dec. 18, 1877	511	158	12	1035
198,581	Same Corn and cotton planter	Dec. 25, 1877	899	275	12	1101
	Donald, David. (*See* Crumbie, Alexander, assignor.)					
	Donaldson, Richard A., *et al.* (*See* Hipperling, William, assignor.)					
192,746	Donaldson, Robert B., Washington, D. C. Dental plugger	July 3, 1877	185	54	12	38
186,545	Donaldson, William, assignor to F. Millward, trustee, Cincinnati, Ohio. Fire-alarm telegraph bell-striker	Jan. 23, 1877	748	229, 230	11	134
197,616	Donaldson, William, Cincinnati, Ohio. Lathe for turning pottery-ware	Nov. 27, 1877	945	281	12	922
194,338	Donaldson, William J., Buffalo, N. Y. Stove-pipe thimble	Aug. 21, 1877	583	175	12	326
	Donges, John W. (*See* Kyrie, Robert A., assignor.)					
195,588	Donley, William J., assignor of one-half interest to C. S. Caffrey, Camden, N. J. Trotting-sulky	Sept. 25, 1877	859	255	12	545
196,142	Same same	Oct. 16, 1877	486	141	12	645
198,582	Donohoe, Thomas, New York, N. Y. Coat-hanger	Dec. 25, 1877	900	275	12	1101
7,470	Donohue, Bernard, Yonkers, N. Y. Gas-burner	Jan. 23, 1877	855	264	11	149
195,589	Same Combined wrench and pipe-cutter	Sept. 25, 1877	860	256	12	546
	Donovan, Daniel J. (*See* Hoff, Hans H., assignor.)					
197,617	Donovan, John T., Waco, Tex. Cotton cleaner and condenser	Nov. 27, 1877	947	281	12	922
193,935	Doolan, Richard J., Albany, N. Y. Transfer-sheet for graining wood	Aug. 7, 1877	137		12	253
197,347	Doolittle, Harrison, Plain City, Ohio. Stove-pipe shelf	Nov. 20, 1877	654	193	12	871

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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195,748	Doolittle, Henry B., Doolittle's Mills, Ind. Slide-valve adjuster	Oct. 2, 1877	58	17	12	569
194,060	Doolittle, William B., Brooklyn, N. Y. Carriage-slat iron	Aug. 28, 1877	895	267	12	378
187,605	Doolson, William., Philadelphia, Pa. Water-heater	Feb. 20, 1877	688	214	11	314
190,673	Dopp, H. William, Buffalo, N. Y. Hydrocarbon-liquid attachment for gas-burners	May 15, 1877	599	178	11	840
195,108	Same.....Automatic cylinder-cock	Sept. 11, 1877	366	110	12	459
198,281	Dora, Alvin T., Chariton, Iowa. Hay rake and loader	Dec. 18, 1877	609	184	12	1049
	Doran, James A. (*See* Moore, John C., assignor.)					
188,606	Dordet, Victor, Philadelphia, Pa. Filter	Mar. 20, 1877	646	200	11	483
194,226	Doremus, Willard D., Washington, D. C., assignor of two-thirds interest to J. W. Mancourt, Brooklyn, N. Y. Machine for compressing and stamping lead seals	Aug. 14, 1877	455	138	12	302
189,088	Doremus, William T., New York, N. Y. Sash-fastener	Apr. 3, 1877	68	25	11	568
	Dorey, Charles, *et al.* (*See* Sloan, James D., assignor.)					
187,829	Doring, Ernest N., New York, N. Y. Drawer-desk	Feb. 27, 1877	932	289	11	354
	Doriot, V., *et al.* (*See* Fields, Charles C., assignor.)					
198,004	Dorr, John P., Oconto, Wis. Steering apparatus	Dec. 11, 1877	306	93	12	999
190,200	Dorr, Joseph P., jr., Jonesport, Me. Cable-stopper	May 1, 1877	87	25	11	758
197,348	Dorr, Joseph P., jr., assignor to self and H. H. Leighton, Indian River, Me. Anchor-tripper	Nov. 20, 1877	654	193	12	871
197,199	Dorris, Stephen J., Milford, Tex. Cotton-gin feeder	Oct. 16, 1877	539	156	12	652
186,327	Doscher, Claus, Hastings-upon-Hudson, N. Y. Apparatus for cooling bone-black	Jan. 16, 1877	522	158	11	92
196,343	Dost, Theodor, Baltimore, Md., assignor to W. Wilkins. Bristle-mixer	Oct. 23, 1877	700	202	12	684
188,728	Doten, Ira S., Bristol, Ill. Device for closing doors	Mar. 27, 1877	776	239	11	509
190,133	Doten, Ira S., Bristol Station, Ill. Spectacles	May 1, 1877	20	5	11	749
194,809	Dotey, William, assignor of one-half interest to S. M. Thorne, Wilmington, Ohio. Steam water-elevator	Sept. 4, 1877	55	18	12	408
7,867	Doty, Henry H., Norfolk, Va. Lamp	Aug. 28, 1877	1010	300	12	392
186,201	Same.....Lamp-burner	Jan. 16, 1877	394	120	11	76
194,496	Doty, Henry H., Washington, D. C. Railway-rail joint	Aug. 21, 1877	740	220	12	346
194,863	Doty, Reuben, Wellsville, N. Y. Combined spring-shackle and step	Sept. 4, 1877	107	33	12	415
	Doubleday, Henry H. (*See* Cross, John R., assignor) (Reissue.)					
	Same.....(*See* Fox, Samuel L., assignor) (Reissue.)					
	Doubleday, H. H. (*See* Redmond, Owen, assignor) (Reissue.)					
	Doud Seymour L. (*See* Somers, Will. H., assignor.)					
187,523	Dougherty, James, New York, N. Y. Curtain-fixture	Feb. 20, 1877	617	191	11	304
196,568	Doughty, Frank E., New York, N. Y. Billiard-bridge	Oct. 30, 1877	942	272	12	728
	Douglas, B., *et al.* (*See* Douglas, Joseph W., assignor.)					
	Same.....same.....(Reissue.)					
195,265	Douglas, Bailey B., Newark, N. J., assignor to Rubber Clothing Company, New York, N. Y. Hose-reel	Sept. 18, 1877	545	158	12	492
	Douglas, Benjamin, jr., *et al.* (*See* Lamb, James C., assignor.)					
189,709	Douglas, George B., and L. C. Wemple, assignors of two-thirds interest to T. K. Elvey, Evanston, Ill. Mower	Apr. 17, 1877	711	219	11	667
189,889	Douglas, John B., assignor to Morris Tasker & Co., limited, Philadelphia, Pa. Expanding screw-tap	Apr. 24, 1877	919	280	11	702
7,774	Douglas, Joseph W., Middletown, Conn., assignor to W. and B. Douglas. Knapsack fire-engine (Reissue.)	July 3, 1877	264	77	12	47
192,979	Same.....Portable pump	July 10, 1877	438	131	12	81
	Douglas, W., *et al.* (*See* Douglas, Joseph W., assignor.)					
	Same.....same.....(Reissue.)					
196,200	Douglas, William H., Stourbridge, England. Stud or clasp for fastening gloves, &c	Oct. 16, 1877	540	157	12	653
189,200	Douglass, George, Bridgeport, Conn. Die for forming sucker-rod joints	Apr. 3, 1877	164	57	11	581
187,830	Douglass, John, Millport, Mo. Quilting attachment for sewing-machines	Feb. 27, 1877	932	289	11	354
186,546	Douglass, Joseph, McConnellstown, Pa. Spike-puller	Jan. 23, 1877	750	230	11	134
	Douglass, William. (*See* Jones, Richard, assignor.)					
	Douglass, W. O., *et al.* (*See* Mason, Albert C., assignor.)					
188,238	Dour, John F., New York, N. Y. Lamp	Mar. 13, 1877	285	89	11	424
	Dover Stamping Company. (*See* Foss, L. Bacon, assignor.)					
191,228	Dow, Charles H., Providence, R. I. Safety holdback	May 29, 1877	1166	349	11	932
189,710	Dow, Christopher C., Bridgeborough, N. J., assignor of one-half interest to S. C. Upham, Philadelphia, Pa. Car-coupling	Apr. 17, 1877	712	220	11	668
	Dow, Myron. (*See* Roberts, Charles C., assignor.)					
186,993	Dow, Thomas H. C., Tampico, Ill. Shovel-plow	Feb. 6, 1877	79	27	11	212
195,352	Dowdell, Abner W., Philadelphia, Pa. Vegetable-grater	Sept. 18, 1877	619	183	12	503
186,666	Dowdle, Jacob S., Saint Louis, Mo. Camel for raising vessels	Jan. 30, 1877	870	269	11	160
187,222	Dowler, Joseph W., Saint Louis, Mo. Hand-cultivator	Feb. 13, 1877	304	99	11	256
198,282	Dowlin, Marshall R., North Adams, Mass. Cow's bag-protector	Dec. 18, 1877	610	184	12	1049
192,419	Dowling, Robert H., and E. S. Perry, assignors of one-fourth interest to D. De Wolf, Newark, Ohio, Car-coupling	June 26, 1877	956	287	11	1131
198,005	Dowling, Thomas, New Orleans, La. Shoe	Dec. 11, 1877	306	94	12	999
198,508	Dowling, Thomas, Gloucester, Mass. Cylindrical coupling for shafting	Dec. 25, 1877	839	255	12	1091
196,201	Downer, Edward F., and G. Kampf, Utica, N. Y. Carpet-sweeper	Oct. 16, 1877	541	157	12	653
196,437	Downes, Henry, New York, N. Y. Bent faucet for bottles	Oct. 23, 1877	786	227	12	696
187,364	Downey, William F., Washington, D. C. Trap for preventing the inflow of back water	Feb. 13, 1877	448	141	11	275
197,838	Same.....Sewer and other traps	Dec. 4, 1877	133	40	12	964
191,521	Downing, George, assignor of one-half interest to C. Eaton, Chicago, Ill. Stamp-mill	June 5, 1877	11	3	11	978
188,344	Downing, Jerome F., Erie, Pa. Combined chair and carriage	Mar. 13, 1877	384	120	11	438
196,973	Same.....Child's carriage	Nov. 13, 1877	254	75	12	804
	Downs, Willis. (*See* Witherell, Loren R., assignor.)					
196,884	Doyen, Erasmus P., Portland, Me. Combined fire-pot and water-heater	Nov. 6, 1877	156	46	12	782
188,729	Doyle, Edward H., Albany, N. Y. Air-heating furnace	Mar. 27, 1877	778	239	11	569
	Doyle, James B., *et al.* (*See* Curtis, Marshall S., assignor.)					
187,365	Doyle, John, Hoboken, N. J., assignor to A. Robertson, New York, N. Y. Thread-cutter for sewing-machines	Feb. 13, 1877	448	141	11	275
186,235	Doyle, Thomas J., Rheatown, Tenn. Grain-separator	Jan. 16, 1877	423	129	11	80
	Doyle, William H. (*See* Throop & Doyle.)					
	Drago, William F. (*See* Concannon, Washington, assignor.)					
186,464	Drain, Henry T., Tama City, Iowa. Force-pump	Jan. 23, 1877	675	207	11	124
193,695	Drake, Cornelius E., assignor to self and J. S. Murray, Avoca, Iowa. Grain-distributor	July 31, 1877	1201	360	13	209
197,109	Drake, Edwin S., Brooklyn, N. Y. Lamp	Nov. 13, 1877	399	117	12	825
197,110	Same.....Safety-lamp	Nov. 13, 1877	400	117	12	825
	Drake, Frank G., administrator. (*See* Drake, Oliver P.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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192,747	Drake, Horace K., Brooklyn, N. Y. Ore-mill	July 3, 1877	186	54	12	38
197,349	Same same	Nov. 20, 1877	655	194	12	872
190,294	Drake, Jacob, New York, assignor of one-half interest to A. Van Horn, Brooklyn, N. Y., Ventilator for chimneys	May 1, 1877	179	54	11	769
197,020	Drake, John W., Tolono, Ill. Combined lamp-shade and reflector	Nov. 13, 1877	299	88	12	811
197,619	Drake, John, assignor to self, E. D. Chadwick, and W. H. Taylor, Denison City, Tex. Baling-press	Nov. 27, 1877	948	282	12	923
197,968	Drake, Lewis W., Hazleton, Pa. Coffin and casket	Dec. 11, 1877	272	83	12	993
197,618	Drake, Mahlon S., Newark, N. J., assignor to H. C. Dean, New York, N. Y. Spring-scales for weighing	Nov. 27, 1877	948	281	12	923
187,832	Drake, Merritt V., assignor of two-thirds interest to J. S. and C. Nave, Attica, Ind. Car-starter	Feb. 27, 1877	933	290	11	355
187,833	Drake, Merritt V., assignor of one-fourth interest to Newman P. Foster, Attica, Ind. Turbine water-wheel	Feb. 27, 1877	934	290	11	355
193,232	Drake, Oliver P., deceased, by F. G. Drake, administrator, Boston, Mass. Carbureter.	July 17, 1877	700	214	12	123
	Drake, Patrick H. (*See* Long & Drake.)					
188,607	Drake, Simeon N., New Orleans, La. Bale-tie	Mar. 20, 1877	647	200	11	484
188,608	Same same	Mar. 20, 1877	648	201	11	484
196,438	Same same	Oct. 23, 1877	787	227	12	696
191,662	Drake, William H., and P. B. Wight, Chicago, Ill. Fire-proof column	June 5, 1877	143	44	11	995
	Draper & Sons, George. (*See* Luders, Thomas L., assignor) (Reissue.)					
	Draper, Ellen, *et al.* (*See* Phelps, Charles H., assignor.)					
	Draper, Elliot B. (*See* Furlong, Thomas T., assignor.)					
	Draper, George, *et al.* (*See* Carroll, William T., assignor) (Reissue.)					
	Draper, George. (*See* Cheetham, Linneus, assignor) (Reissue.)					
186,323	Draper, George, Hopedale, Mass. Spinning-machine	Jan. 16, 1877	507	154, 155	11	91
186,324	Same Ring-spinning frame	Jan. 16, 1877	512	156, 157	11	91
186,325	Same Spinning-frame	Jan. 16, 1877	517	157, 158	11	91
186,326	Same Tension-regulator for spindle driving bands	Jan. 16, 1877	521	158	11	92
192,493	Same Spindle and bobbin	June 26, 1877	1025	309	11	1140
195,887	Same Ring-spinning frame	Oct. 9, 1877	204	58	12	598
	Draper, William F., *et al.* (*See* Carroll, William T., assignor) (Reissue.)					
186,322	Draper, William F., Hopedale, Mass. Ring-spinning frame	Jan. 16, 1877	501	153, 154	11	91
188,784	Same Bobbin	Mar. 27, 1877	844	256	11	518
189,890	Same Spinning-frame	Apr. 24, 1877	920	280	11	703
190,710	Same Ring-spinning frame	May 15, 1877	638	189, 190	11	844
192,490	Same Spinning-ring holder	June 26, 1877	1022	309	11	1139
	Drayer, William E., *et al.* (*See* Shellenback, Peter, assignor.)					
	Drayton, Benjamin A. (*See* Osborn & Drayton.)					
191,574	Dressell, Andrew, Cleveland, Ohio. Locomotive signal head-light	June 5, 1877	60	18	11	984
	Dresser, Charles A. (*See* Conklin, Joseph I., jr., assignor.)					
193,365	Drevar, George, London, England. Combined life-buoy and water-velocipede	July 24, 1877	855	262	12	152
	Drew, Henry L. (*See* Leavitt & Drew.)					
191,321	Drew, James W. and W. J., and W. M. Robinson, Grand Rapids, Mich. Vehicle running-gear	May 29, 1877	1248	375, 376	11	943
7,869	Drew, Luna, Irving, Wis. Baker for heating-stoves (Reissue)	Sept. 4, 1877	196	60	12	427
191,035	Same Baker	May 22, 1877	967	287	11	896
	Drew, Walter J. (*See* Drew & Robinson.)					
195,875	Drew, Walter J., assignor of one-half interest to W. M. Robinson, Grand Rapids, Mich. Vehicle-wheel	Oct. 2, 1877	182	52	12	587
192,905	Dreyer, Henry, Oakland, Tex. Ground-squirrel exterminator	July 10, 1877	370	109	12	70
193,366	Dreyfus, Bernhard, New York, N. Y. Show-box	July 24, 1877	857	262	12	152
190,477	Dreyfuss, Bernard, and S. Sachs, New York, N. Y. Finishing card-board for perforating	May 8, 1877	384		11	804
196,745	Driesslein, Charles L., Chicago, Ill. Water-supply pipe	Nov. 6, 1877	8	3	12	762
187,752	Same Coal-mining machine	Feb. 27, 1877	851	265	11	344
187,831	Drinker, Joseph D., Montrose, Pa. Traveler for jib-sheets	Feb. 27, 1877	933	289	11	354
198,537	Dripps, William, Coatesville, Pa. Apparatus for cooling milk	Dec. 25, 1877	863	263	12	1095
198,360	Driver, Robert H., and C. A. Smith, Philadelphia, Pa. Railway-rail chair	Dec. 18, 1877	676	207	12	1059
	Droegold, Walker H. (*See* Hench, Samuel N., assignor.)					
187,258	Drum, George B., Syracuse, Nebr. Insect-destroyer	Feb. 13, 1877	341	108	11	260, 261
198,237	Drummond, George P., Ottawa, Canada. Process and apparatus for producing printing-surfaces	Dec. 18, 1877	556	171, 172	12	1042
198,238	Same Machine for obtaining printing-surfaces for reading-matter	Dec. 18, 1877	565	172	12	1043
198,239	Same Rotary printing and perforating machine	Dec. 18, 1877	569	173	12	1043
198,240	Same Machine for obtaining printing-surfaces for reading-matter	Dec. 18, 1877	571	173	12	1043
191,241	Same Machine for embossing and perforating paper	Dec. 18, 1877	575	174	12	1044
	Drummond, James T., *et al.* (*See* Pepper & Gephart, assignors.)					
189,711	Drummond, James T., Alton, Ill. Marking plug-tobacco	Apr. 17, 1877	713	220	11	668
	Drummond, William W. (*See* Aikin & Drummond.)					
	Dryfoos, Joseph, *et al.* (*See* Beck, August, assignor.)					
	Dryfoos, Louis, *et al.* (*See* Beck, August, assignor.)					
	Dubois, A. McKim, *et al.* (*See* Jacoby, D. W., assignor) (Reissue.)					
	Same (*See* Woods, Columbus, assignor.)					
	Du Bois, John. (*See* Bengler, Edward F., assignor.)					
192,242	Du Bois, John, Williamsport, Pa. Cutter-head	June 19, 1877	752	230	11	1092
196,644	Same Cutter for lathes	Oct. 30, 1877	1014	291	12	739
	Du Breil, Charles B. M. (*See* Reynier, Nicolas E., assignor.)					
197,620	Du Brul, Cyriac, assignor to N. Du Brul, Cincinnati, Ohio. Cigar-mold	Nov. 27, 1877	950	282	12	923
	Du Brul, Napoleon. (*See* Du Brul, Cyriac, assignor.)					
	Same (*See* Duburn, Anthony M., assignor.)					
	Same (*See* Writner, George W., assignor.)					
189,926	Du Brul, Napoleon, Cincinnati, Ohio. Treadle movement	Apr. 24, 1877	953	291	11	707
190,711	Same Safety-valve	May 15, 1877	640	190	11	845
190,712	Same Relief-valve	May 15, 1877	641	190, 191	11	845
	Dubz, Ephraim, *et al.* (*See* Thoman, Zacharias, assignor.)					
196,885	Duburn, Anthony M., Newport, Ky., assignor to N. Du Brul, Cincinnati, Ohio. Lantern	Nov. 6, 1877	156	46	12	782

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188,609	Duc, Henry A., jr., Charleston, S. C. Refrigerating shipping-box	Mar. 26, 1877	649	201	11	484
196,202	Duchemin, William, Boston, Mass. Bobbin-winder for sewing-machines	Oct. 16, 1877	541	157	12	653
192,685	Duchesne, Rene C., Villeneuve-la-Lande, France. Steam boiler	July 3, 1877	138	38	12	31
197,111	Duck, Simeon, assignor to self and J. Davies, Victoria, British Columbia. Mortising-machine	Nov. 13, 1877	401	118	12	826
	Duckett, Frank. (*See* Markham, W. B., assignor.)					
186,994	Duckham, Frederic E., Millwall Docks, England. Dredging-machine	Feb. 6, 1877	80	27	11	212
	Dudley, George D. (*See* Woods & Dudley.)					
189,089	Dudley, George W., Alton, N. H. Oil-stone holder	Apr. 3, 1877	69	25	11	568
188,872	Dudley, James H., Poughkeepsie, N. Y. Cartridge-loading implement	Mar. 27, 1877	933	284	11	530
196,239	Same same	Oct. 23, 1877	787	227	12	696
197,256	Dudley, James N., and J. Anderson, Petrolia, Cal. Saw-handle	Nov. 20, 1877	560	165	12	857
187,606	Dudley, Richard, Erie, Pa. Torsion-spring for vehicles	Feb. 20, 1877	689	214	11	314
189,344	Same Wagon-tongue support	Apr. 10, 1877	340	109	11	611
195,888	Same Spring-seat for vehicles	Oct. 9, 1877	206	59	12	599
187,109	Dueberg, Helmuth, Berlin, Germany. Brick-kiln	Feb. 6, 1877	184	60	11	228
191,410	Duecker, Conrad, assignor to C. E. Gray and A. B. Bowman, Tamaroa, Ill. Carriage-jack	May 29, 1877	1323	401	11	953
193,233	Duerstock Bernard, Cincinnati, Ohio. Stove for cooking and heating	July 17, 1877	701	215	12	123
191,522	Duesler, William, Saint Joseph, Mo. Car-coupling	June 5, 1877	12	4	11	978
197,209	Duesler, William, jr., Saint Joseph, Mo. Agricultural fork	Nov. 20, 1877	515	152	12	850
191,755	Duff, Alfred H., Philadelphia, Pa. Lamp-shade holder	June 12, 1877	238	75	11	1014
187,110	Duff, Samuel, Pittsburg, Pa. Machine for rolling metals of irregular shapes	Feb. 6, 1877	185	60, 61	11	228
192,494	Duffey George, assignor of one-half interest to J. F. Glidden, De Kalb, Ill. Fence-wire tightener	June 26, 1877	1027	309	11	1140
	Duffield, Robert C., *et al.* (*See* Duffield, Upton J., assignor.)					
194,418	Duffield, Upton J., assignor to W. C. and R. C. Duffield, Wheeling, W. Va. Car-heater.	Aug. 21, 1877	657	197	12	336
	Duffield, William C., *et al.* (*See* Duffield, Upton J., assignor.)					
198,452	Duffy, Terrence, Pittsburg, Pa. Spring-hinge for shutters, &c	Dec. 25, 1877	782	238	12	1084
	Dufner, John. (*See* Miller, John, assignor.)					
189,025	Dugan, James H., and G. Moncrief, Stoneham, Mass. Butter-cutter	Apr. 3, 1877	16	5	11	560
187,809	Dugan, Philip A., Brooklyn, N. Y. Snow-guard for roofs	Aug. 7, 1877	13	4	12	236
188,287	Same same	Mar. 13, 1877	327	103	11	430
	Duggan, Thomas. (*See* Jesson & Duggan.)					
	Dugin, Elizabeth E., *et al.* (*See* Griffin, Caleb H., assignor.)					
7,627	Dujardin, Pierre A. J., Lille, France, assignor to Gold and Stock Telegraph Company, New York, N. Y. Printing-telegraph (Reissue)	Apr. 24, 1877	1161	353	11	734
193,643	Duke, Jesse R., assignor of one-half interest to W. J. Patton, Morristown, Ark. Apparatus for destroying insects	July 31, 1877	1149	344	12	202
193,491	Du Laney, G. L., New York, N. Y. Corset	July 24, 1877	971	295	12	168
	Dulaney, Theophilus. (*See* Dulaney, William H. and T.)					
192,420	Dulaney, William H. and T., Peterstown, W. Va. Butter-carrier	June 26, 1877	957	287	11	1131
186,927	Dulin, Charles E., Philadelphia, Pa. Book-clamp	Feb. 6, 1877	8	3	11	204
192,157	Duljé, Eustache R., Newark, N. J. Egg-beater	June 19, 1877	664	203	11	1081
	Dull, David. (*See* Sears, Ephraim, assignor.)					
190,566	Dumas, Louis, Paterson, N. J. Shuttle for looms	May 8, 1877	467	139	11	815
197,021	Dummer, Edward, Boston, assignor of one-half interest to D. W. Watson, Malden, Mass. Printing-press	Nov. 13, 1877	300	89	12	811
190,295	Dummer, Paul E., and P. E. Malmstrom, New York, N. Y. Faucets	May 1, 1877	180	54	11	769
187,524	Dummer, Samuel R., Jersey City, N. J. Sealing-press	Feb. 20, 1877	617	191	11	304
189,345	Same Liquid measure	Apr. 10, 1877	341	109	11	611
193,696	Same Tobacco-pipe	July 31, 1877	1202	360	12	209
	Dunbar & Co., Robert. (*See* Sangster, James, assignor.)					
	Dunbar, George H., *et al.* (*See* Aitken, Robert W., assignor.)					
	Dunbar, George H., *et al.* (*See* Sangster, Amos W., assignor.)					
	Dunbar, George H., *et al.* (*See* Whitman, Charles, assignor.)					
190,674	Dunbar, Henry N., Mentor, Ohio. Farm-gate	May 15, 1877	600	178	11	840
	Dunbar, Robert, *et al.* (*See* Aitken, Robert W., assignor.)					
	Dunbar, Robert, *et al.* (*See* Whitman, Charles, assignor.)					
	Dunbar, Thomas G. (*See* Phillips & Dunbar.)					
194,505	Dunbar, W. Wallace, Atlanta, Ill. Egg-tester	Aug. 21, 1877	747	223	12	348
185,898	Duncan, George, W. A. and G. A. Wilson, Liverpool, England. Rotary paper-folding machine	Jan. 2, 1877	85	26	11	19
188,873	Duncan, James, and B. E R. Newlands, London, England. Treating sugar	Mar. 27, 1877	934	284	11	530
191,523	Duncan, John P., assignor of one-half interest to D. H. Crebs, Helena, Ark. Tank-valve	June 5, 1877	13	4	11	978
192,364	Duncan, John P., assignor of one-half interest to A. F. Mulkey, Helena, Ark. Fire-escape	June 26, 1877	905	271	11	1124
194,810	Duncan, Joseph S., assignor of one-fourth interest to E. E. Cook, San Francisco, Cal Ore-washer	Sept. 4, 1877	55	18	12	408
194,388	Duncan, Thomas, Chicago, Ill. Step-ladder	Aug. 28, 1877	833	248	12	369
	Duncan, William. (*See* McIntyre, John, assignor.)					
194,389	Duncanson, Thomas C., Jeffersonville, Ohio. Dumping-wagon	Aug. 28, 1877	833	248	12	369
195,749	Dunderdale, Cleaveland F., Brooklyn, N. Y. Composition for making hydraulic cement	Oct. 2, 1877	58		12	569
193,644	Dunham, George, Ueionville, Conn. Machine for making bolts	July 31, 1877	1151	{344 {345	12	202
188,874	Dunham, Henry, Abington, Mass., assignor to T. M. Bristol, New York, N. Y. Nail-driving machine for boots and shoes	Mar. 27, 1877	935	{284 {285	11	530
188,240	Dunham, Rufus, Deering, Me. Salt-vessel	Mar. 13, 1877	287	90	11	425
	Dunham, Truman, *et al.* (*See* Seys, Cornelius D., assignor.)					
	Dunham, W. M., *et al.* (*See* Seys, Cornelius D., assignor.)					
196,643	Dunlap, Francis M., Allegheny, and R. Magill, assignors of part interest to B. F. Asper and D. P. Hoyle, Pittsburg, Pa. Combined speed and distance recorder and indicator	Oct. 30, 1877	1012	294	12	739
196,746	Dunlop, Robert, assignor of one-half interest to T. Meikle, Louisville, Ky. Device for drying and conditioning leaf-tobacco	Nov. 6, 1877	9	3	12	762
	Dunn, Eleanor. (*See* Requa & Dunn.)					
198,036	Dunn, Harry, assignor of two-thirds interest to H. H. and H. Harrison, Nashville, Tenn. Bag-fastener	Dec. 11, 1877	379		12	1010
188,239	Dunn, Patrick and T. Harris, Côte, St. Paul, Quebec, Canada. Machine for finishing horseshoe-nails	Mar. 13, 1877	286	90	11	425
188,785	Dunn, Robert, South Bend, Ind. Landau quarter-light	Mar. 27, 1877	845	256	11	518
192,115	Same Landau-carriage top	June 19, 1877	618	188	11	1075

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Dunn, William. (*See* Alexander & Dunn.)					
196,569	Dunn, William G., Fairland, Ind. Railroad-rail joint	Oct. 30, 1877	942	272	12	728
	Dunn, William L. (*See* Thompson, James, assignor.)					
194,419	Dunn, William W., San Francisco, Cal. Machine for drilling rocks	Aug. 21, 1877	658	198	12	336
196,642	Dunn, William, assignor of one-half interest to D. B. Ruffner, Philadelphia, Pa. Boiler-tube cleaner	Oct. 30, 1877	1011	294	12	739
	Dunne, Joseph P. (*See* Lyness & Dunne.)					
192,421	Dunnebache, August, and James Linden, Lansing, Mich. Stump-elevator	June 26, 1877	958	287	11	1131
	Dunnebake, Anton. (*See* Peterson & Dunnebake.)					
	Dunning, David M. (*See* Foster, Joseph S., assignor.)					
189,614	Dunning, William B., Geneva, N. Y. Car-coupling	Apr. 17, 1877	620	192	11	655
	Dunscomb, Daniel. (*See* Sheldon & Dunscomb.)					
198,583	Dunton, William, and J. L. Simpkins, Hopkins, Mich. Device for lining wells	Dec. 25, 1877	900	275	12	1101
191,322	Dunwald, John P., New York, N. Y. Vegetable slicer and grater	May 29, 1877	1250	376	11	944
192,491	Dupee, Henry D., Boston, Mass. Mordanting textile fabrics	June 26, 1877	1023		11	1139
192,492	Same.....Printed textile fabric	June 26, 1877	1024		11	1140
198,538	Du Perow, Charles, Stratford, Canada. Harrow	Dec. 25, 1877	865	263	12	1095
	Dupré, Pierre S. E. (*See* Rogé Poret-Baffoy & Dupré.)					
186,328	Duprez, Charles A., Reims, France. Apparatus for separating burgeons or germs from grain	Jan. 16, 1877	523	159	11	92
194,340	Dupuy, Charles M., Philadelphia, Pa. Obtaining wrought iron or steel direct from the ore	Aug. 21, 1877	585	175	12	326
	Durand & Co. (*See* Durand, Wallace, assignor.)					
198,362	Durand, Albert A., New York, N. Y. Milker	Dec. 18, 1877	678	207	12	1059
188,875	Durand, Emile, Philadelphia, Pa. Toy frog	Mar. 27, 1877	936	285	11	531
190,837	Durand, Michel, Montreal, Canada. Fire-escape	May 15, 1877	749	222	11	860
121,280	Durand, Rufus, Canandaigua, N. Y. Thrashing-machine	May 29, 1877	1214	365	11	938
188,110	Durand, Wallace, Newark, N. J., assignor to Durand & Co., Newark, N. J. Thimble	Mar. 6, 1877	141	42	11	399
192,640	Durant, Edward G., Racine, Wis. Educational globe	July 3, 1877	89	26	12	24
192,641	Durant, Edward G., Racine, Wis., and T. Keane, Chicago, Ill. School-desk	July 3, 1877	90	26	12	24
	Durant, Frederick C. (*See* Edwards, David, assignor.)					
195,809	Durbin, John C., Columbus Junction, Iowa. Meal-bin	Oct. 2, 1877	113	34	12	577
	Durgin, Elizabeth E. (*See* Griffin, Caleb H., assignor.)					
	Durham & Woaster. (*See* Durham, Peter C., assignor.)					
188,876	Durham, Frederick W., and H. Howse, Homerton, England. Governor	Mar. 27, 1877	937	285	11	531
186,995	Durham, Peter C., assignor to Durham & Woaster, New Haven, Conn. Falling-front carriage	Feb. 6, 1877	81	27	11	212
	Durlach, Elias. (*See* Spethman, William, assignor.)					
188,109	Durnell, Milton, King's Creek, Ohio. Lifting-jack	Mar. 6, 1877	141	42	11	399
188,610	Durning, Joseph S., assignor to J. M. Hamill, Pittsburg, Pa. Bale-tie	Mar. 20, 1877	649	201	11	484
	Durrin, Reuben. (*See* Walter & Durrin.)					
187,525	Duryee, James A., Nunda, N. Y. Churn	Feb. 20, 1877	618	191	11	304
187,223	Duryee, John K., New York, N. Y., assignor to G. W. Gregory, Boston, Mass. Machine for making tooth-picks	Feb. 13, 1877	305	99	11	256
194,339	Dusch, John, and H. Lewis, Bay City, Ill. Band-cutting feeder for thrashing-machines	Aug. 21, 1877	584	175	12	326
	Dusenbury, Benjamin H. (*See* Dusenbury, Charles and B. H.)					
196,974	Dusenbury, C. Coles, New York, N. Y. Burglar-alarm	Nov. 13, 1877	255	76	12	801
196,975	Same.....same	Nov. 13, 1877	256	76	12	804
189,090	Dusenbury, Charles and B. H., New York, N. Y. Apparatus for casting metals	Apr. 3, 1877	70	26	11	568
191,323	Dustan, John H., and D. W. Akin, Spartansburg, Pa. Furniture-spring	May 29, 1877	1250	376	11	944
194,079	Dustin, Leander, Elizabeth, N. J., assignor to Singer Manufacturing Company, New York, N. Y. Machine for barring button-holes	Aug. 14, 1877	297	89	12	281
187,111	Dutcher, Henry, Port Jervis, N. Y. Car starter	Feb. 6, 1877	186	61	11	228
	Dutcher Temple Company. (*See* Chapman, Nathan, assignor)(Reissue.)					
	Same.....(*See* Dutcher, Warren W., assignor.)					
	Dutcher, T. Henry. (*See* Ives, Hiram L., assignor.)					
	Dutcher, Vose & Adams. (*See* Pierce, James D., assignor.)					
197,210	Dutcher, Warren W., assignor to Dutcher Temple Company, Hopedale, Mass. Temple-roller drilling-machine	Nov. 20, 1877	515	152	12	850
193,755	Duthie, Robert, Aberdeen, North Britain. Device for drafting ships' lines from a model	July 31, 1877	1254	377	12	217
188,611	Dutrow, David E., Washington, D. C. Safety car-truck	Mar. 20, 1877	650	201	11	484
188,877	Same.....Railway-curve	Mar. 27, 1877	938	286	11	531
	Dutton & Co., R. (*See* Otis, Norton P., assignor.)					
188,786	Dutton, Leander K., Oskaloosa, Iowa. Cutlery-scourer	Mar. 27, 1877	846	257	11	518
191,229	Same.....Chimney-top	May 29, 1877	1166	350	11	932
188,730	Dutton, William A., Cleveland, Ohio. Change-gate	Mar. 27, 1877	780	240	11	510
190,201	Duty, Andrew W., Cleveland, Ohio. Brick-kiln furnace	May 1, 1877	88	25	11	758
198,363	Duty, Michael K., assignor of one-half interest to A. S. Lovcall, Centerville, W. Va. Churn	Dec. 18, 1877	681	207, 208	12	1060
194,341	Duval, George R., Oregon City, Oreg. Vehicle running-gear	Aug. 21, 1877	588	176	12	326
	Dwight & Co., George, jr. (*See* Clark, Julius G., assignor.)					
	Dwight, Caroline M. (*See* Hoyt, John W., assignor.)					
190,015	Dwight, Charles, Brookline, Mass. Fire-escape	Apr. 24, 1877	1046	319	11	719
195,920	Dwight, Walton, Chicago, Ill. Artificial marble, &c	Oct. 9, 1877	237		12	603
185,899	Dwyer, Edward F., Lynn, Mass. Needle-bar and trimming-knife for sewing-machines	Jan. 2, 1877	86	26	11	19
195,109	Dwyer, Jeremiah, and G. H. Barbour, assignors to Michigan Stove Company, Detroit, Mich. Culinary attachment to base-burning heating-stoves	Sept. 11, 1877	368	110	12	459
192,818	Dye, Nelson T., assignor of one-half interest to D. M. Hayworth, Marshalltown, Iowa. Fence-post	July 10, 1877	290	84	12	60
	Dyer, Benjamin L. (*See* Burke, Solomon G., assignor.)					
191,036	Dyer, Charles V., Hallsville, Tex. Revolving conical mold-board	May 22, 1877	968	287	11	896
193,756	Dyer, Fayette, Rock Falls, Ill. Harrow	July 31, 1877	1255	377	12	218
	Dyer, George W., *et al.* (*See* Leighton, James M., assignor.)					
193,936	Dyer, Henry, Springfield, Mass. Shirt-pattern guide	Aug. 7, 1877	137	42	12	253
	Dyer, Mullings. (*See* Dyer, Samuel and M.)					
196,570	Dyer, Samuel and M., Mansfield, Ohio. Harvester	Oct. 30, 1877	943	273	12	728
188,462	Dyer, William, Hyde Park, Mass. Breast-plate for harness	Mar. 20, 1877	516	159	11	465
196,203	Dyett, George H., Ilion, N. Y. Adjustable table	Oct. 16, 1877	543	157	12	653
194,420	Dyott, Charles G., Philadelphia, Pa. Lamp-supporting chandelier	Aug. 21, 1877	659	198	12	336
7,458	Dyott, Michael B., Philadelphia, Pa., assignor to G. H. Lomax, Somerville, Mass. Lamp	Jan. 9, 1877	374	114	11	66

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Dysart, James C., *et al.* (*See* Parker, Stillman, assignor.)					
	Dysart, Joseph, *et al.* (*See* Parker, Stillman, assignor.)					
190,749	Eade, Charles, assignor of one-half interest to H. J. Tarble, Honesdale, Pa. Bed-bottom.	May 15, 1877	675	200	11	849
197,621	Same same....	Nov. 27, 1877	951	282	12	923
189,436	Eads, James B., Saint Louis, Mo. Pipe-joint for pumping and dredging apparatus...	Apr. 10, 1877	430	135	11	622
196,645	Same.....Dredging apparatus	Oct. 30, 1877	1016	295	12	739
196,646	Same.....Hydraulic dredging machine	Oct. 30, 1877	1017	295	12	739
	Eagle Lock Company. (*See* Mix, Frank W., assignor.)					
186,465	Eames, Charles J., New York, N. Y. Apparatus for superheating steam.....	Jan. 23, 1877	676	207	11	124
193,078	Eames, Frederick W., Watertown, N. Y. Coupling for vacuum-brakes.....	July 17, 1877	539	163	12	102
198,584	Same..... same	Dec. 25, 1877	901	276	12	1101
	Eames, Horace L. (*See* Broadmeadow, John P., assignor.)					
198,490	Eames, Horace L., Bridgeport, Conn. Molder's flask and its accessories	Dec. 25, 1877	821	249	12	1089
191,575	Eames, James H., Emerson, Iowa. Hog-catcher.....	June 5, 1877	62	18	11	985
	Earl & Wilson. (*See* Betts, Edgar K., assignor.)					
196,344	Earl, George W., Des Moines, Iowa. Water-wheel	Oct. 23, 1877	701	202	12	684
189,712	Earle, Anthony I., assignor of one-half interest to G. A. Jordan, Valley Falls, R. I. Staff-picker for looms	Apr. 17, 1877	714	220	11	668
190,296	Earle, Ethan H., assignor of one-half interest to W. Hollington, Cameron, Mo. Windmill	May 1, 1877	181	54	11	769
	Earle, Henry, jr. (*See* Farrar, John, assignor.)					
189,026	Earle, Ira M., Pella, Iowa. Breech-loading fire-arm	Apr. 3, 1877	17	6	11	560
192,980	Earle, Sidney, Corry, Pa. Animal-trap	July 10, 1877	439	132	12	81
189,713	Earle, Timothy, Valley Falls, and F. H. Perry, Providence, R. I. Self-sealing fruit-jar.	Apr. 17, 1877	715	220	11	668
194,227	Earle, William, Philadelphia, Pa. Churn.....	Aug. 14, 1877	457	139	12	302
198,006	Earle, Xenophon, Appleton, Wis. Folding-chair	Dec. 11, 1877	307	94	12	999
189,346	Early, Matthias, New Madison, Ohio. Animal-trap	Apr. 10, 1877	342	109	11	611
191,037	Eason, Richard B., assignor to self and S. A. Allen, New York, N. Y. Car-axle box....	May 22, 1877	969	287	11	896
193,858	Same..... same	Aug. 7, 1877	56	18	12	242
195,750	East, Thomas B., Marshfield, Mo. Apple-cutter.....	Oct. 2, 1877	59	18	12	569
193,492	Eastham, Albert S., Navasota, Tex. Gin-saw-filing machine.....	July 24, 1877	973	295	12	168
	Eastman, Ambrose. (*See* McCarter & Wheeler, assignors.)					
195,590	Eastman, George C., Lewiston, Me. Whip and rein holder.....	Sept. 25, 1877	861	256	12	546
	Eastman, George H. (*See* Pease, Edwin O., assignor.)					
	Eastwood, Buchanan & Smith. (*See* Buchanan & Smith, assignors.)					
198,585	Eastwood, Charles W., Philadelphia, Pa. Brick-machine.....	Dec. 25, 1877	902	276	12	1102
196,204	Eatoo, Asahel K., Brooklyn, N. Y. Process and apparatus for separating silver and other precious metals from lead	Oct. 16, 1877	544	158	12	653
	Eaton, Benjamin F. (*See* Newbury, Alonzo, assignor.)					
	Eaton, Cole & Burnham Company. (*See* Tomlinson, Edwin R., assignor.)					
	Eaton, Collins. (*See* Downing, George, assignor.)					
194,959	Eaton, Isaac, and H. M. Fortney, New Sharon, Iowa. Fifth-wheel for vehicles.....	Sept. 11, 1877	213	67	12	437
192,620	Eaton, James W., assignor of one-half interest to J. W. Cole and G. W. Adams, Chanute, Kans. Nut-lock	July 3, 1877	66	19	12	21
	Eaton, John, *et al.* (*See* Dillon, Jonathan, assignor)..... (Reissue.)					
195,921	Eaton, Oliver N., New York, N. Y. Machine for cutting and perforating veneers for chair-bottoms	Oct. 9, 1877	238	68	12	603
190,963	Eaton, Thomas, jr., Brunswick, Me. Thill-loop or supporter.....	May 22, 1877	894	264	11	886
	Eaton, Waldo R. (*See* Bartels, William H., assignor.)					
197,112	Eaton, William F., Wabash, Va. Gate-latch.....	Nov. 13, 1877	401	118	12	826
196,647	Eaton, William W., Norwich, Conn. Perforating stamps.....	Oct. 30, 1877	1018	296	12	740
189,347	Eaves, John B., Rutherford County, North Carolina. Cotton-chopper.....	Apr. 10, 1877	343	110	11	611
186,329	Eberhard, George F., assignor to Eberhard Manufacturing Company, Pittsburg, Pa. Buckle	Jan. 16, 1877	524	159	11	92
186,547	Same.....Hame and trimming	Jan. 23, 1877	751	230	11	134
187,834	Same Harness-trimming	Feb. 27, 1877	935	290	11	355
189,202	Eberhard, Josiah, Burr Oak, Mich. Bag-holder.....	Apr. 3, 1877	166	53	11	581
	Eberhard Manufacturing Company. (*See* Eberhard, George F., assignor.)					
189,615	Eberhard, William, Akron, Ohio. Pipe-wrench.....	Apr. 17, 1877	621	192	11	656
	Eberhart, David C. (*See* Gibson & Eberhart.)					
197,022	Eberhart, George G., Cedar Falls, Iowa. Table-leaf support.....	Nov. 13, 1877	302	89	12	811
193,493	Eberhart, Lloyd, Laporte City, Iowa. Egg-beater.....	July 24, 1877	975	295	12	169
197,257	Eberly, Cyrus, Columbus Ohio. Sash-fastener.....	Nov. 20, 1877	561	166	12	857
195,110	Eberly, David B., Pine Village, Ind. Car-coupling.....	Sept. 11, 1877	368	111	12	459
198,007	Eberly, David B., assignor to self and T. J. Farden, Pine Village, Ind. Heating-stove	Dec. 11, 1877	308	94	12	999
	Eberman & Sons, W. S. (*See* Cain, John, assignor.)					
191,038	Ebert, Alexander E., Knoxville, Tenn. Cigar-box.....	May 22, 1877	969	287	11	896
190,134	Ebert, John S., New York, N. Y. Stilt.....	May 1, 1877	21	6	11	749
	Ebey, Henry, *et al.* (*See* Mack, David, assignor.)					
7,851	Eby, Henry H., Mendota, Ill. Cob-carrier for corn-shellers..... (Reissue)..	Aug. 21, 1877	752	224	12	348
187,753	Ecaubert, Frederic, New York, N. Y. Manufacture of watch-cases.....	Feb. 27, 1877	853	266	11	344
187,810	Eccleston, Thomas W., Boston, Mass. Hose-coupling.....	Aug. 7, 1877	13	5	12	236
194,550	Eckart, John, Munich, Germany. Preserving flesh and fish by salicylic acid.....	Aug. 28, 1877	801	238	12	464
	Eckenfels, Frank A. (*See* Merritt & Eckenfels.)					
187,811	Eckermann, Frederick, New York, N. Y. Suspender-clasp.....	Aug. 7, 1877	14	5	12	236
190,567	Eckersley, James, Philadelphia, Pa. Feed-water heater.....	May 8, 1877	468	139	11	815
192,642	Eckert, Seayrs, Pittsburg, Pa. Water-closet valve.....	July 3, 1877	91	27	12	24
194,899	Eckman, John W., Greenfield, Ill. Safety railway truck and track.....	Sept. 4, 1877	141	44	12	430
194,900	Same.....Car-coupling.....	Sept. 4, 1877	142	44	12	430
	Eclipse Steam Manufacturing Company. (*See* Bolloman, George W., assignor.)					
198,008	Edard, Guillaume, Paris, France. Magnetic battery for curative purposes.....	Dec. 11, 1877	308	95	12	999
191,324	Eddelman, William M., Wahoo, Nebr. Fruit drier.....	May 29, 1877	1251	377	11	944
191,047	Eddy, Alfred D., and H. J. Stolzenbach, Tiffin, Ohio. Mortising-machine.....	June 12, 1877	427	132	11	1038
187,970	Eddy, George W., Waterford, N. Y. Stop-valve.....	Mar. 6, 1877	14	4	11	382
	Eddy, Lewis B. (*See* Hubbard & Eddy.)					
	Eddy, Samuel, *et al.* (*See* Wallis, Theodore, assignor.)					
198,586	Edel, Emil, Hanover, Prussia. Truss.....	Dec. 25, 1877	904	276	12	1102
	Edelheim, Carl. (*See* Thurston, Samuel H., assignor.)					
193,697	Edgarton, William W., Bouckville, N. Y., assignor of one-half interest to H. L. Hopkins, Manchester, Iowa. Mower.....	July 31, 1877	1203	360	12	210
	Edgecomb, George W. (*See* Gore & Edgecomb.)					
188,111	Edge, James S., jr., Yardley, England. Breech-loading fire-arm.....	Mar. 6, 1877	142	42, 43	11	399
	Edgecomb, Edward F. (*See* Swan & Edgecomb.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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189,437	Edgley, Edwin G., assignor to Crane, Breed & Co., Cincinnati, Ohio. Cap for vehicle-hubs	Apr. 10, 1877	431	136	11	622
	Edington, Isaac B. (*See* Rowe & Edington.)					
	Edison, Thomas A. (*See* Pope & Edison) (Reissue.)					
186,330	Edison, Thomas A., Menlo Park, N. J., assignor to Western Union Telegraph Company. Acoustic electric telegraph	Jan. 16, 1877	525	159	11	92
186,548	Edison, Thomas A., Menlo Park, N. J., assignor to Domestic Telegraph Company, New York, N. Y. Telegraphic alarm and signal apparatus	Jan. 23, 1877	752	230, 231	11	124
195,751	Edison, Thomas A., Newark, N. J., assignor to self and G. Harrington, Washington, D. C. Automatic telegraph	Oct. 2, 1877	60	18	12	569
195,752	Same same	Oct. 2, 1877	61	18	12	570
196,747	Edison, Thomas A., Menlo Park, N. J. Stencil-pen	Nov. 6, 1877	10	3	12	762
198,087	Edison, Thomas A., Menlo Park, N. J., assignor to Western Union Telegraph Company. Telephonic telegraph	Dec. 11, 1877	380	120	12	1010
198,088	Same same	Dec. 11, 1877	382	120	12	1010
198,089	Same Telephonic or electro-harmonic telegraph	Dec. 11, 1877	383	120	12	1011
193,148	Edmans, Frederick P., Troy, N. Y. Bed-bottom	July 17, 1877	612	185	12	111
188,878	Edmans, William M., Troy, N. Y. Spring bed-bottom	Mar. 27, 1877	939	286	11	531
196,440	Edmans, William M., and H. Mott, Troy, N. Y. Spring bed-bottom	Oct. 23, 1877	789	227	12	697
	Edmonds, Charles W. (*See* Phelps & Edmonds) (Reissue.)					
196,143	Edmondson, James H., Valparaiso, Ind. Road-scraper	Oct. 16, 1877	487	141	12	645
197,839	Edmunds, Robert H., jr, Ridgeway, S. C. Gage for tobacconists	Dec. 4, 1877	133	40	12	964
188,345	Edris, William, Eugene City, Oreg. Grain-separator	Mar. 13, 1877	385	121	11	438
190,425	Edson, Jacob, assignor of one-half interest to J. Baker, trustee, Boston, Mass. Self-adjusting sheave for booms	May 8, 1877	327	96	11	797
197,769	Edson, Jacob, Boston, and W. H. Haynes, Sudbury, Mass. Anti-frictional sheave for pulley-blocks	Dec. 4, 1877	64	21	12	955
194,080	Edson, Nathaniel T., New Orleans, La. Tightening bale-bands	Aug. 14, 1877	298	89	12	282
197,258	Same Feed-water regulator for steam-boilers	Nov. 20, 1877	562	166	12	857
194,034	Edson, Robert H., Detroit, Mich. Steam-engine	Aug. 14, 1877	253	75	12	276
	Edward, John W. (*See* Osborne, Eugene F., assignor.)					
195,992	Edwards, Alfred L., New York, N. Y. Shirt	Oct. 9, 1877	314	88	12	613
194,081	Edwards, Charles, assignor of one-half interest to C. A. Boldin, Jamaica, N. Y. Boot and shoe	Aug. 14, 1877	299	89	12	282
196,790	Edwards, Craig K., Boston, Mass. Smoke-ventilator	Nov. 6, 1877	51	16	12	768
193,938	Edwards, David, assignor to self and F. C. Durant, New York, N. Y. Steam-trap	Aug. 7, 1877	140	42	12	253
186,717	Edwards, Evelyn L., Vineland, N. J. Dough-kneading machine	Jan. 30, 1877	917	284	11	166
	Edwards, Henry H. (*See* Edwards, John R. and H. H.)					
7,815	Edwards, Henry H., Baltimore, Md. Temporary binder for books (Reissue)	July 24, 1877	1087	325	12	182
186,815	Edwards, Henry H., Minneapolis, Minn. Metallic self-binder for books	Jan. 30, 1877	1011	314	11	179
	Edwards, John. (*See* Livesey, Edwards & Jeffreys.)					
193,494	Edwards, John R. and H. H., Baltimore, Md. Book and cover	July 24, 1877	976	296	12	169
190,017	Edwards, Martin L., Salem, Ohio. Meat-chopper	Apr. 24, 1877	1048	319	11	719
195,993	Same Metal-drilling machine	Oct. 9, 1877	315	88, 89	12	613
195,994	Same Clamp	Oct. 9, 1877	317	89	12	613
7,524	Edwards, Oliver, Florence, Mass. Skate (Reissue)	Feb. 20, 1877	787	244	11	327
188,288	Same Oil-stove	Mar. 13, 1877	328	103, 104	11	430
192,643	Same Skate	July 3, 1877	93	27	12	25
193,937	Same Oil and gas stove	Aug. 7, 1877	138	42	12	253
195,995	Same Broiler	Oct. 9, 1877	318	89	12	614
190,016	Edwards, William L., Ellison, Ill. Plow	Apr. 24, 1877	1047	319	11	719
188,879	Eells, Albert F., and S. C. Loud, Boston, Mass. Ship's pump	Mar. 27, 1877	939	286	11	531
195,996	Egan, James J., and H. W. Hill, Chicago, Ill. Fire-proof floor for buildings	Oct. 9, 1877	319	90	12	614
194,342	Egerton, C. Calvert, Baltimore, Md., assignor of two-thirds interest to W. S. and H. Richmond, New York, N. Y. Vehicle-hub attaching device	Aug. 21, 1877	589	176	12	326
194,343	Same Stamp-canceling device	Aug. 21, 1877	590	176	12	327
198,090	Egerton, C. Calvert, Baltimore, Md. Ink for canceling	Dec. 11, 1877	384		12	1011
197,840	Egery, Thomas N., Bangor, Me. Belt-shifter	Dec. 4, 1877	134	40	12	965
	Egge, Frederick. (*See* Smith & Egge.)					
190,297	Egge, Frederick, and W. Smith, Bridgeport, Conn. Lock for drawers, &c	May 1, 1877	182	55	11	769
189,714	Egger, Martin, Mariaschien, Austria. Electro-magnetic engine	Apr. 17, 1877	717	221	11	668
198,587	Eggers, Heinrich, C. E., and H. C. Kirchmann, Hamburg, Germany. Furnace for steam-boilers	Dec. 25, 1877	904	277	12	1102
	Eggers, Selmar. (*See* Peirce & Eggers.)					
	Eglan, Albert. (*See* Stangler, John, assignor.)					
194,421	Egloff, Bathis, Staten Island, assignor to A. Weidmann and C. L. Schwarz, New York, N. Y. Illuminating device for Christmas-tree, &c	Aug. 21, 1877	661	199	12	336
192,574	Ehmer, Rudolph, New York, N. Y. Platform-scales	July 3, 1877	17	5	12	15
198,009	Same Spring-scales for weighing	Dec. 11, 1877	310	95	12	999
190,478	Ehrlich, Leo, Saint Louis, Mo. Combined letter-sheet and envelope	May 8, 1877	384	112	11	804
7,542	Ehrrichson, Asmus J., Akron, Ohio, assignor to F. Schumacher. Oatmeal machine (Reissue)	Feb. 27, 1877	1068	330	11	372
190,426	Eickemeyer, Rudolf, Yonkers, N. Y. Grain gatherer and binder	May 8, 1877	328	96, 97	11	797
195,810	Same Fulling-mill	Oct. 2, 1877	111	34	12	577
186,549	Eichenlaub, Frank, and J. Gabriel, Lawrenceburg, Ind. Sash-balance	Jan. 23, 1877	753	231	11	131, 135
7,738	Eichholtz, Mathias, Troy, N. Y., assignor, by mesne assignments, to H. H. and J. H. Pattee and I. P. Pillsbury, Monmouth, Ill. Equalizing cultivator (Reissue)	June 12, 1877	542	166	11	1052
194,228	Eichler, Joseph, Saint Louis, Mo. Fire-escape	Aug. 14, 1877	458	139	12	302
189,438	Eichmuller, Robert, assignor of one-half interest to A. C. Sanford, Thomaston, Conn. Door-bolt	Apr. 10, 1877	431	136	11	622
	Eicholzer, Emil. (*See* Reitz & Eicholzer.)					
197,461	Eilrich, Carl, Chicago, Ill. Cradle	Nov. 27, 1877	781	233	12	899
186,718	Einig, John, Jacksonville, Fla. Steam-whistle	Jan. 30, 1877	918	284	11	166
191,123	Eisele, Christian, Philadelphia, Pa. Key-hole guard	May 22, 1877	1045	313	11	907
195,266	Eiseman, Jacob, Galena, Ill. Wrench	Sept. 18, 1877	546	158	12	492
193,324	Eisenbeis, Louis, and C. Nau, Allegheny, Pa. Vinegar-generator	July 24, 1877	814	250	12	146
192,686	Eisendick, Franz, New York, N. Y. Scroll-sawing machine	July 3, 1877	139	39	12	31
	Eisenla, Jacob. (*See* Albaum & Eisenla.)					
188,112	Ekerman, Alfred, Brooklyn, N. Y. Sash-fastener	Mar. 6, 1877	144	43	11	400
194,138	Elbe, Henry, Niagara Falls, assignor to self and A. Goldsmith, New York, N. Y. Fire-escape	Aug. 14, 1877	373	112	12	291
191,846	Elberg, Henry H., Greenfield, Ind. School-desk	June 12, 1877	330	102	11	1025

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
7,994	Elbers, Alexander D., Hoboken, N. J. Treating mineral wool (Reissue)..	Dec. 18, 1877	760		12	1072
191,524	Same.....Process and apparatus for treating mineral wool	June 5, 1877	14	4	11	978
194,422	Same.....Treating mineral wool	Aug. 21, 1877	662		12	336
195,889	Same.....Treating artificial mineral wool to render it less brittle for paper, &c..	Oct. 9, 1877	207		12	599
187,835	Elder, Joseph, assignor of one-half interest to P. Farwell, Beardstown, Ill. Car-axle box.....	Feb. 27, 1877	935	290	11	355
	Eldridge, Edwin. (*See* Davis, Daniel and A. W., assignors.)					
	Same.....(*See* Davis, Robert W., assignor.)					
189,439	Eldridge, George W., Chatham, assignor of one-half interest to J. Raymond, Harwich, Mass. Vehicle hub and box.....	Apr. 10, 1877	432	136	11	622
188,731	Elford, Alfred T., Oakland, Cal. Inside blind.....	Mar. 27, 1877	780	240	11	510
195,353	Elgass, Oscar, New York, N. Y. Rotary engine and pump	Sept. 18, 1877	619	183	12	503
188,954	Elkanah, D. Richmond, assignor, by mesne assignments, to self and G. W. Hoffman. Detroit, Mich. Revolving advertising-case	Mar. 27, 1877	1013	311	11	541
198,509	Ellenbecker, John B., Lake Linden, Mich. Steam-stamp.....	Dec. 25, 1877	839	255	12	1091
198,091	Eller, John F., Saint Louis, Mo. Swing.....	Dec. 11, 1877	385	121	12	1011
185,800	Ellerhorst, John G., Bellevue, Ky. Still.....	Jan. 2, 1877	87	26	11	19
193,859	Ellig, Henry, assignor to self and J. H. Schreiner, Philadelphia, Pa. Match-box.....	Aug. 7, 1877	57	18	12	242
190,750	Ellinwood, Augustus E., Garrettsville, Ohio. Engraving-machine table.....	May 15, 1877	677	200	11	850
192,907	Ellinwood, Augustus E., assignor to self, R. Irwin, Garrettsville, and W. W. Harris, Cleveland, Ohio. Engraving-machine.....	July 10, 1877	371	110	12	71
7,933	Elliot, Joseph D., Newton, assignor to Rogers Upright Piano Company, Boston, Mass. Stringing-device for piano-fortes (Reissue)..	Nov. 6, 1877	234	70	12	753
193,495	Same.....Piano-action.....	July 24, 1877	977	296	12	169
195,493	Elliot, Joseph D., Newton, Mass. Cloth-folding machine.....	Sept. 25, 1877	770	226	12	532
191,509	Elliot, William H., New York, N. Y. Rock-drilling engine.....	May 29, 1877	1439	433	11	966
194,035	Same.....Traveling-crane	Aug. 14, 1877	254	76	12	276
194,960	Elliot, William H., New York, and F. Clark, Ilion, N. Y. Machine for cleaning paper-pulp screens.....	Sept. 11, 1877	214	67	12	437
	Elliott, Alvah T. (*See* Cherry & Elliott.)					
195,267	Elliott, Charles B., and H. C. Alexander, New York, N. Y.; said Alexander assignor to said Elliott. Soap-making composition.....	Sept. 18, 1877	546		12	492
	Elliott, George. (*See* Graham, Joseph M, assignor.)					
198,010	Elliott, George W., Boonesborough, Mo. Heel-spur.....	Dec. 11, 1877	311	95	12	1000
194,661	Elliott, James W., assignor of one-half interest to W. L. Ellis, Prattville, Ala. Cotton-gin feeder	Aug. 28, 1877	896	267	12	378
196,886	Elliott, James W., Prattville, Ala. Corn-planter.....	Nov. 6, 1877	157	46	12	782
	Elliott, J. D. (*See* Morrill, Nathaniel H., assignor.)					
	Elliott, John M. (*See* Cornelis, Edward, assignor.)					
195,111	Elliott, John S., Trout River Lines, N. Y. Milk-cooler.....	Sept. 11, 1877	370	111	12	459
	Elliott, Sterling. (*See* Laflin & Elliott.)					
	Elliott, William H. (*See* Van Pelt & Lee, assignors.)					
	Ellis, Allie B. (*See* Daggett, Harvey P., assignor.)					
191,039	Ellis, David T., Ware, Mass., assignor to Belknap Manufacturing Company, Bridgeport, Conn. Clamp or device for attaching hose to couplings.....	May 22, 1877	970	288	11	896
191,663	Ellis, David T., Ware, Mass. Gage-cock for steam-boilers.....	June 5, 1877	144	45	11	995
192,906	Ellis, Edmund S., Lynn, Mass. Mop.....	July 10, 1877	370	110	12	71
	Ellis, Edwin. (*See* Bramwell, William C., assignor.)					
197,969	Ellis, Frederick L., and B. A. Lewis, Plainville, Conn. Manufacture of clock-keys	Dec. 11, 1877	273	83	12	993
191,325	Ellis, Frederick R., Liverpool, assignor to G. Haworth, St. Michaels Hamlet, England. Expansion-joint for tubular water fire-bars.....	May 29, 1877	1251	377	11	944
195,494	Ellis, George A., assignor of one-half interest to T. L. Ricart, Philadelphia, Pa. } Sulky-plow }	Sept. 25, 1877	771	{ 226 / 227 }	12	532
195,753	Ellis, George H., London, England. Portable hot-air or vapor bath.....	Oct. 2, 1877	61	18, 19	12	570
	Ellis, James H. (*See* Moir & Ellis.)					
	Ellis, Jesse M., *et al.* (*See* Bromley, John, assignor.)					
	Ellis, John G. (*See* Hurd, L. Ell., assignor.)					
	Ellis, Joseph F. (*See* Robinson & Ellis.)					
	Ellis, Knapp & Co. (*See* Knapp, Abram B., assignor.)					
187,461	Ellis, Mathew, and P. M. Nelson, Hudson, Wis. Car-axle box-cover.....	Feb. 20, 1877	558	172	11	296
188,612	Ellis, Newton, and G. A. Willis, assignors to A. C. Jackman, Cameron, Mo. Foot scraper and cleaner	Mar. 20, 1877	651	202	11	484
190,713	Ellis, Silas M., East Andover, N. H. Cider-press.....	May 15, 1877	643	191	11	845
	Ellis, Washington L. (*See* Elliott, James W., assignor.)					
196,144	Ellis, William H., and W. McDonald, Brooklyn, N. Y. Manifold copying-book.....	Oct. 16, 1877	488	142	12	645
186,331	Ellison, Edward, San Francisco, Cal. Mechanism for lessening draft of vessels	Jan. 16, 1877	526	159	11	92
192,687	Ellison, Thomas, Abingdon, Ill. Ironing-board	July 3, 1877	140	39	12	31
191,411	Ells, C. Stewart, Moline, Ill. Eyebolt for whiffletrees	May 29, 1877	1324	402	11	953
192,422	Ellsworth, Charles J., Fisherville, N. H. Holdback for vehicles.....	June 26, 1877	958	287	11	1131
192,495	Ellsworth, Charles T., Decatur, Ind. Rein-holder and whip-socket.....	June 26, 1877	1027	309	11	1140
	Ellsworth, John S., *et al.* (*See* Arnold, Lauren B., assignor.)					
	Ellwood, Isaac L., *et al.* (*See* Glidden & Vaughan, assignors)(Reissue.)					
	Ellwood, Reuben. (*See* Upham, Andrew L., assignor.)					
7,560	Ellwood, Reuben, and R. L. Pitcher, Sycamore, Ill.; said Pitcher assignor to said Ellwood. Cultivator..... (Reissue)..	Mar. 20, 1877	763	234	11	498
186,816	Elmenhorst, Walter R., assignor to F. O. Matthiessen and Wiechers Sugar Refining Company, Jersey City, N. J. Apparatus for drying hard sugar	Jan. 30, 1877	1012	314	11	179
188,006	Elmenhorst, Walter R., Jersey City, N. J. Bone-black kiln	Mar. 6, 1877	49	13, 14	11	387
195,591	Same.....Manufacturing powdered white sugar.....	Sept. 25, 1877	862		12	546
188,043	Elmore, Norman, Granby, Conn. Dog-collar	Mar. 6, 1877	88	26	11	392
186,550	Elsasser, Charles, San Francisco, Cal. Carpet beater and sweeper combined.....	Jan. 23, 1877	754	231	11	135
7,977	Elsom, William J., Cortland, N. Y. Fifth-wheel for vehicles..... (Reissue)..	Dec. 4, 1877	230	67	12	977
194,513	Same.....Vehicle-seat fastener	Aug. 28, 1877	768	228	12	359
195,754	Same.....Fifth-wheel for vehicles	Oct. 2, 1877	63	19	12	570
	Elster, Justus V. (*See* Wright, Ezra P., assignor.)					
	Elstner, David, *et al.* (*See* Jones, Evan J., assignor.)					
192,748	Elston, Henry P., Richmond, Va. Carriage-curtain fastener	July 3, 1877	188	54	12	38
198,364	Elsworth, Almond M., Lowell, Mich. Distributor for insect-destroying powders.....	Dec. 18, 1877	677	207	12	1059
192,423	Elterich, Charles, New York, N. Y., assignor to self and A. H. Briggs, Jersey City, N. J. Tap-wrench	June 26, 1877	959	288	11	1131
195,997	Elterich, Charles, New York, N. Y., assignor of one-half interest to A. H. Briggs, Jersey City, N. J. Drill-chuck	Oct. 9, 1877	320	90	12	614
196,205	Same.....same	Oct. 16, 1877	545	158	12	653

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
	Elvey, Thomas K. (*See* Douglas & Wemple, assignors.)					
187,366	Elward, John H., Saint Paul, Minn. Horse-power	Feb. 13, 1877	449	141	11	275
187,607	Same.....Thrashing-machine	Feb. 20, 1877	960	214, 215	11	314
193,112	Elward, John H., assignor to Saint Paul Harvester Works, Saint Paul, Minn. Harvester	July 17, 1877	584	176	12	107
196,887	Elward, John H., Saint Paul, Minn. Horse-power	Nov. 6, 1877	158	46, 47	12	782
189,551	Elwood, John J., assignor of one-half interest to S. Sloss, Cleveland, Ohio. Water-heater for stoves	Apr. 17, 1877	555	173	11	647
189,550	Elwood, Reuben, Sycamore, Ill. Attaching cultivator-shovels	Apr. 17, 1877	555	173	11	647
188,241	Ely, Columbus G., Tipton, Mo. Car-coupling	Mar. 13, 1877	287	90	11	425
	Ely, Eugene A. (*See* Hopping, Eugene C., assignor.)					
193,645	Ely, George B., Saint Johnsbury, Vt. Hoe	July 31, 1877	1153	345	12	203
193,399	Ely, George E. and S. D., assignors of one-half interest to H. O. Candee, Rochester, N. Y. Whip	July 24, 1877	885	271	12	156
	Ely, John C., *et al.* (*See* Barrett, Richard W., assignor.)					
	Ely, Samuel D. (*See* Ely, George E. and S. D.)					
	Ely, Smith, *et al.* (*See* Barrett, Richard W., assignor.)					
192,819	Ely, William F., Pleasantville, Md. Wagon-brake	July 10, 1877	290	85	12	60
	Ely, William G. (*See* Allen, Edwin, assignor.)					
193,149	Emanuel, Samuel H., Gloucester, Mass. Combined overall and jumper	July 17, 1877	613	186	12	111
196,571	Same.....same	Oct. 30, 1877	944	273	12	729
194,961	Emerson, Benjamin K., Seville, Ohio. Mold-board plow	Sept. 11, 1877	216	67	12	438
190,838	Emerson, Charles H., Waltham, Mass. Insect-destroyer	May 15, 1877	750	222	11	860
	Emerson, Edwin R., *et al.* (*See* Philbrick, John W., assignor.)					
194,815	Emerson-French, Nanette S., New York, N. Y. Toilet-mask	Sept. 4, 1877	60	20	12	409
187,367	Emerson, George W., Philadelphia, Pa. Temporary binder	Feb. 13, 1877	450	142	11	275
189,203	Same.....same	Apr. 3, 1877	167	58	11	581
	Emerson, John T. (*See* Lovett, George L., assignor.)					
	Emerson, Ralph, *et al.* (*See* Jones, James H., assignor.)					
7,976	Emerson, Richard, Sycamore, Ill., assignor to self and H. H. Mason. Harvester.. (Reissue)	Dec. 4, 1877	219	67	12	977
191,664	Emerson, Richard, assignor of one-half interest to H. H. Mason, Sycamore, Ill. Harvester-rake	June 5, 1877	145	45	11	995
7,790	Emery, Albert H., New York, N. Y. Hydraulic press.....(Reissue)..	July 17, 1877	783	240	12	134
7,791	Same.....same.....(Reissue)..	July 17, 1877	783	240, 241	12	134
	Emery, Cyrus. (*See* Smith, Walton D., assignor.)					
	Emery, Franklin. (*See* Wilson, George W., assignor.)					
194,229	Emery, Henry C., Flourtown, Pa. Attachment to saw-bucks	Aug. 14, 1877	459	139	12	303
196,206	Emery, Isaiah S., New Haven, Conn. Inhaler and respirator	Oct. 16, 1877	546	158	12	653
191,799	Emery, Temple, Peshtigo, Wis. Gang-saw gage	June 12, 1877	279	87	11	1019
190,427	Emlaw, Andrew J., Grand Haven, Mich. Grain-conveyer	May 8, 1877	331	97	11	798
190,839	Emmert, Ezra, Franklin Grove, Ill. Seed sower and cultivator	May 15, 1877	751	222, 223	11	860
	Emmert, William P. (*See* Kochsmeir, Henry P., assignor.)					
198,194	Emmitt, John V., Sterling, Ill. Carriage-top	Dec. 18, 1877	512	158	12	1035
	Emmons, Alonzo C. (*See* Parker, William D., assignor.)					
	Empire Transportation Company. (*See* Kimball, Frederick I., assignor.)					
	Same.....same.....(Reissue.)					
	Empire Wringer Company. (*See* Brinkerhoff, Jacob, assignor.).....(Reissue.)					
	Same.....(*See* White, Nelson B., assignor).....(Reissue.)					
	Same.....(*See* Woodcock, Leonard M., assignor.)					
187,836	Endres, John J., New York, N. Y., assignor of one-third interest to J. H. Bonn, Weehawken, N. J. Safety hoisting apparatus	Feb. 27, 1877	936	291	11	355
191,124	Engel, Ernst, St. Petersburg, Russia. Breech-loading fire-arm	May 22, 1877	1045	313	11	907
190,714	Enggren, Charles A., Brooklyn, N. Y. Gas-carbureter	May 15, 1877	641	191	11	845
193,442	England, Paren, Lincoln, Nebr. Temporary binder	July 24, 1877	925	282	12	162
194,230	Same.....same	Aug. 14, 1877	460	139	12	303
	English & Dixon. (*See* Stone, William S., assignor.)					
191,665	English, Analdo M., and W. W. Covell, Providence, R. I. Manufacture of plated jewelry	June 5, 1877	147	45	11	996
195,495	English, Edward B., and W. H. Burr, Philadelphia, Pa. Furnace for destroying garbage.	Sept. 25, 1877	773	227	12	533
194,231	English, Ezra O., and N. Whyte, deceased, R. Whyte, administratrix, Saint Louis, Mo. Plow	Aug. 14, 1877	461	140	12	303
	English, James G., *et al.* (*See* Pflegar, Frank P., assignor.)					
191,412	Englund, Samuel C., Moline, Ill. Wrench	May 29, 1877	1324	402	11	953
191,413	Ennes, Homer L., Liberty Centre, Ohio. Ladder	May 29, 1877	1325	402	11	954
185,901	Eno, Joseph A., Council Bluffs, Iowa, assignor of one-half interest to A. McKirgan, Newark, N. J. Railway-rail joint	Jan. 2, 1877	88	27	11	19
	Enos Car Coupler Company. (*See* Hopkins, Edmund S., assignor.)					
	Enos Car Coupling Company. (*See* Enos, Joab, assignor).....(Reissue.)					
7,515	Enos, Joab, deceased, W. Gray, Davenport, Iowa, administrator, assignor, by mesne assignments, to Enos Car Coupling Company, Chicago, Ill. Car-coupling.. (Reissue)..	Feb. 20, 1877	775	242	11	325
197,725	Enos, Levi S., assignor of one-half interest to H. S. Hall, Almond, N. Y. Oil-stove	Dec. 4, 1877	18	3	12	949
192,220	Enright, Dennis K., Chicago, Ill. Water and wine cooler	July 10, 1877	291	85	12	00
197,023	Ent, Ralph K., North Topeka, Kans. Millstone balance	Nov. 13, 1877	303	89	12	812
	Enterprise Manufacturing Company. (*See* Baker & Asbury, assignors.)					
197,259	Entrekin, William G., Philadelphia, Pa. Photographic burnisher	Nov. 20, 1877	562	166	12	857
191,230	Entwisle, Thomas B., Washington, D. C. Chimney-top	May 29, 1877	1167	350	11	932
189,204	Eppelsheimer, William, San Francisco, Cal. Clamp for endless-rope railways	Apr. 3, 1877	168	58	11	581
193,757	Same.....Tramway-track for wire-rope railways	July 31, 1877	1256	377	12	218
193,939	Same.....Tightening and stretching ropes, belts, &c	Aug. 7, 1877	141	43	12	254
	Equitable Co-operative Foundry Company. (*See* Cribben, Henry, assignor.)					
194,344	Erdman, Edward M., Lykens, Pa. Grate-bar	Aug. 21, 1877	591	177	12	327
187,259	Erlebach, Adolph, Boston, Mass. Croquet-stand	Feb. 13, 1877	342	109	11	261
198,092	Same.....Combined toy work-bench and tool-chest	Dec. 11, 1877	386	121	12	1011
	Erlenwein, Johann. (*See* Blohm, Hinrich M., assignor.)					
187,608	Ernst, Franz, assignor of one-half interest to C. Kollenberg, Chicago, Ill. Horseshoe.	Feb. 20, 1877	694	216	11	314
	Ernst, John G. (*See* Bollman & Ernst.)					
190,298	Ernst, William M., New York, N. Y. Safety-valve	May 1, 1877	183	55	11	770
	Erpelding, Lambert. (*See* McCormick, Baker & Erpelding.)					
186,466	Erskine, Massena B., and C. A. Weed, assignors to J. I. Case & Co., Racine, Wis. Adjustable tightening-roller and removable girt	Jan. 23, 1877	577	207	11	124

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
186,817	Erskine, Massena B., assignor to J. I. Case & Co., Racine, Wis. Master wheel and adjustable traverse-pinion, &c	Jan. 30, 1877	1013	315	11	180
195,592	Ertel, George, Quincy, Ill. Portable hay-press	Sept. 25, 1877	862	256	12	546
	Erwin, James. (*See* Messenger & Erwin.)					
198,588	Erwin, Sandford W., Fayette County, Indiana. Gate	Dec. 25, 1877	905	277	12	1102
190,018	Erzinger, Henry, Amana, Iowa. Cake-cutter	Apr. 24, 1877	1049	320	11	720
193,496	Eshleman, J. Albert, Philadelphia, Pa. Scarf-retainer	July 24, 1877	977	296	12	169
186,236	Eskine, Massena B., assignor to J. I. Case & Co., Racine, Wis. Hook for draw-rods for horse-powers	Jan. 16, 1877	424	130	11	80
	Essex, Henry. (*See* Goodwin & Essex.)					
188,346	Essex, Henry, Meadville, Pa. Reversible knob-latch	Mar. 13, 1877	387		11	438
197,770	Same.....Pitmen	Dec. 4, 1877	65	21	12	955
7,705	Essex, James J., Newport, R. I. Atomizer	(Reissue) May 29, 1877	1446	435	11	966
194,811	Essig, Bartholomew, Sacramento, assignor of one-half interest to C. C. Wilson and A. Simonton, El Dorado, Cal. Bed-bottom	Sept. 4, 1877	56	19	11	408
	Esterly, George, *et al.* (*See* Owens, John D., assignor.)					
193,234	Esterly, George, assignor of one-half interest to G. W. Esterly, Whitewater, Wis. Harvester	July 17, 1877	702	215	12	123
	Esterly, George W. (*See* Esterly, George, assignor.)					
	Esterly, G. W. (*See* Owens, John L., assignor.)					
194,298	Estes, George, Lowell, Mass. Bobbin-support for spinning-frames	Aug. 21, 1877	540	163	12	320
	Estey & Co., J. (*See* Fuller, Levi K., assignor.)					
187,837	Esty, William, Fitchburg, Mass., assignor to N. Corning, North Londonderry, N. H., G. W. Hobbs, Uxbridge, and D. W. B. Jackson, Boston, Mass. Sewing-machine	Feb. 27, 1877	938	292	11	355
192,058	Esty, William, Fitchburg, assignor to Vitrified Wheel and Emery Company, Ashland, Mass. Emery-wheel	June 19, 1877	565		11	1068
192,059	Same.....Kiln for baking emery-wheels	June 19, 1877	566	172	11	1068
196,345	Esty, Willliam, Ashland, Mass. Emery-wheel	Oct. 23, 1877	702	202	12	684
191,048	Etheridge, Joseph I., Mishawaka, Ind. Mechanical movement	June 12, 1877	429	132	11	1038
	Ethridge, Frank N. (*See* Ethridge, Martin V. and F. N.)					
193,079	Ethridge, Martin V. and F. N., Lynn, Mass. Burnishing-machine for boots and shoes	July 17, 1877	540	163	12	102
194,662	Ethridge, Martin V., Lynn, assignor to J. H. Williams, Newton, and C. W. Holden, Boston, Mass. Automatically measuring the area of sides of leather	Aug. 28, 1877	897	268	12	378
	Ettenheimer, Emmanuel. (*See* Clune, John F., assignor.)					
	Ettinger, Jacob. (*See* Barrow, Thomas E., assignor.)					
187,526	Ettinger, Jacob, Mansfield, Ohio. Revolving indexer	Feb. 20, 1877	619	192	11	304
	Ettinger, William B. (*See* Hirsch & Ettinger.)					
190,964	Etzensberger, Robert U., London, England. Apparatus for making infusions	May 22, 1877	894	265	11	887
187,609	Euler, Peter, Troy, N. Y. Ice-tongs	Feb. 20, 1877	695	216	11	314
	Eureka Fire-Hose Company. (*See* Gillespie, James E., assignor.)					
187,462	Eutebrouk, Charles, Boston, Mass. Breach-loading fire-arm	Feb. 20, 1877	558	173	11	296
193,150	Same.....Cartridge capping and uncapping implement	July 17, 1877	613	186	12	111
	Evans & Son., S. W. (*See* Smith, Orren M., assignor)	(Reissue.)				
	Evans, Alexander H. (*See* Henry, Cornelius, assignor.)					
198,093	Evans, Charles R., Hornellsville, N. Y. Stock-car	Dec. 11, 1877	387	121	12	1011
190,840	Evans, David, and W. Snyder, Salmon Creek, Cal. Gang-edger	May 15, 1877	752	223	11	860
7,918	Evans, George F., Norway, Me., assignor, by mesne assignments, to H. Waterman, Hudson, N. Y. Bench-plane	(Reissue) Oct. 23, 1877	876	252	12	707
189,848	Evans, George F., Mechanics' Falls, Me. Lock for magazine fire-arms	Apr. 24, 1877	874	247	11	697
189,849	Same.....Shaping and finishing articles in metal	Apr. 24, 1877	876	268	11	697
192,749	Same.....Magazine fire-arm	July 3, 1877	188	54	12	38
189,928	Evans, George R., Carson City, Nev., assignor of three-fourths interest to E. E. Scott, D. N. Brule, and A. Tremblay. Ore sluice and concentrator	Apr. 24, 1877	954	292	11	708
198,283	Evans, George R., and W. P. Prescott, Carson City, Nev. Shaft-furnace for smelting tailings and condensing mercury	Dec. 18, 1877	610	185	12	1049
198,284	Same.....Fire-brick compound	Dec. 18, 1877	612		12	1049
186,551	Evans, Henry C., assignor to A. F. Dalzell, trustee, Pittsburg, Pa. Skelping-die	Jan. 23, 1877	755	231	11	135
193,400	Evans, Henry C., Pittsburg, Pa. Machine for welding metal tubing	July 24, 1877	886	271	12	156
	Evans, Horace F. (*See* Cobb & Evans.)					
195,593	Evans, Horace F., Chicago, Ill. Building-paper	Sept. 25, 1877	864	256	12	546
186,719	Evans, John M., Waukegan, Ill. Meal cabinet	Jan. 30, 1877	918	{284 / 285}	11	167
193,325	Evans, John W., Chicago, Ill. Piano-forte action	July 24, 1877	816	250	12	146
7,628	Evarts, John A., West Meriden, Conn., assignor to Bradley & Hubbard Manufacturing Company. Extension lamp-fixture	(Reissue) Apr. 24, 1877	1163	353	11	734
186,332	Same.....Drop-light attachment for chandeliers	Jan. 16, 1877	527	160	11	92
186,121	Evans, Lemuel E., New York, N. Y. Bale-tie	Jan. 9, 1877	306	94	11	58
189,027	Evans, Nathaniel, assignor of one-half interest to E. S. Fisher, Boston, Mass. Lacing boots and shoes	Apr. 3, 1877	18	6	11	560
	Evans Rifle Manufacturing Company. (*See* Evans, Warren R., assignor). (Reissue.)					
198,011	Evans, Robley D., and W. M. Wood, United States Navy. Signal-lantern	Dec. 11, 1877	311	96	12	1000
	Evans, Samuel. (*See* Tyrrell & Evans.)					
189,440	Evans, Silvanus P., Ash Ridge, Ohio. Ditching-machine	Apr. 10, 1877	433	136	11	622
	Evans, S. W. (*See* Smith, Orren M., assignor.)					
187,368	Evans, Thomas B., Bangs, Va. Broom	Feb. 13, 1877	451	142	11	275
189,552	Evans, Walter N., Chicago, Ill. Ticket-reel	Apr. 17, 1877	557	173	11	648
7,635	Evans, Warren R., Thomaston, Me., assignor, by mesne assignments, to Evans Rifle Manufacturing Company. Magazine-gun	(Reissue) Apr. 24, 1877	1172	355	11	736
198,453	Evans, William H., Boston, Ind. Windmill	Dec. 25, 1877	783	238	12	1084
185,822	Eveleth, Benjamin F., and H. Krueger, Boston, Mass. Device for cutting butter in tubs	Jan. 2, 1877	8	3	11	10
7,531	Evendon, John G., assignor of two-thirds interest to F. C. Wilson, Chicago, Ill. Can for oil, &c	(Reissue) Feb. 27, 1877	1056	325	11	371
189,927	Everest, James B., Yonkers, N. Y. Door-check	Apr. 24, 1877	954	292	11	707
	Everett, F. E., *et al.* (*See* Young, William B., assignor.)					
196,572	Everett, Willard S., Hyde Park, Mass. Shutter	Oct. 30, 1877	945	273	12	729
197,927	Everitt, Elisha E., Philadelphia, Pa. Fire-escape	Dec. 11, 1877	228	70	12	987
189,205	Everson, Charles R., Macedon, N. Y. Boiler-bottom	Apr. 3, 1877	170	59	11	582
197,926	Everson, George H., Scottdale, Pa. Hydraulic engine	Dec. 11, 1877	228	69, 70	12	987
	Ewart Manufacturing Company. (*See* Ewart, William D., assignor.)					
	Ewart Manufacturing Company. (*See* Tuttle, Bronson B., assignor.)					
188,113	Ewart, William D., assignor to Ewart Manufacturing Company, Chicago, Ill. Link for drive-chains	Mar. 6, 1877	145	43	11	400

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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188,114	Ewart, William D., assignor to Ewart Manufacturing Company, Chicago, Ill. Link for chains	Mar. 6, 1877	146	44	11	400
188,115	Same.....Link for drive-chain	Mar. 6, 1877	147	44	11	400
188,116	Same.....Link for drive-chains	Mar. 6, 1877	147	44	11	400
188,117	Same.....same	Mar. 6, 1877	148	44	11	400
190,019	Ewart, William D., and J. C. Coonley, Chicago, Ill. Whiffletree hook and clip	Apr. 24, 1877	1050	320	11	720
196,115	Ewart, William D., assignor to Ewart Manufacturing Company, Chicago, Ill. Drive-chain	Oct. 16, 1877	456	133	12	641
196,291	Ewart, William D., Chicago, Ill. Corn-planter	Oct. 23, 1877	647	187 / 188	12	676
	Ewens, Frank, *et al.* (*See* Kast, Joseph, assignor.)					
191,125	Ewing, David B., Indianapolis, Ind. Fire-escape	May 22, 1877	1047	314	11	907
	Ewing, Samuel. (*See* McDonel, Thorn & Ewing.)					
188,787	Ewing, William H., Pittsburg, Pa. Machine for setting up barrels	Mar. 27, 1877	817	257	11	518
188,880	Same.....same	Mar. 27, 1877	940	286	11	531
186,083	Excell, Robert, Chicago, Ill. Boiler	Jan. 9, 1877	270	81	11	53
191,326	Same.....same	May 29, 1877	1252	377	11	944
	Excelsior Flint Glass Company. (*See* Lowery, John, assignor.)					
195,354	Eyler, George W., Staunton, Va. Fire-escape	Sept. 18, 1877	620	184	12	503
189,206	Eynon, Benjamin, Pittsburg, Pa. Feed-water heater	Apr. 3, 1877	171	59	11	582
193,758	Faas, Charles A., Wrentham, Mass. Locket	July 31, 1877	1257	377	12	218
	Faas, William F., *et al.* (*See* McBride, Gideon, assignor.)					
	Same.....(*See* Stewart, Samuel M., assignor.)					
	Faber, Eberhard. (*See* Schrag, Philip, assignor.)					
191,040	Faber, Frederick W., Columbus, Tex. Vehicle-spring	May 22, 1877	971	288	11	896
198,589	Fabronius, Dominick C., Philadelphia, Pa. Toy portrait-gallery	Dec. 25, 1877	906	277	12	1102
7,849	Fachs, Henry, New York, N. Y. Machine for raising or flanging the edges of sheet metal.....(Reissue)	Aug. 14, 1877	526	159	12	310
194,812	Fager, Henry C., and H. J. Godwin, Windsor, N. C. Washing-machine	Sept. 4, 1877	57	19	12	408
	Fahey, John, *et al.* (*See* Maggi, Charles, assignor.)					
196,791	Fahnestock, Benjamin, and H. F. Peckham, Watsonville, Cal. Hinge	Nov. 6, 1877	52	16	12	768
193,940	Failing, Jesse, Umatilla, Oreg. Carpet-fastener	Aug. 7, 1877	142	43	12	254
196,145	Same.....Candlestick	Oct. 16, 1877	488	142	12	645
188,733	Fair, Edward, San Francisco, Cal. Boiler-furnace	Mar. 27, 1877	782	240	11	510
	Fair, Jacob C. (*See* Rinehold, William, assignor.)					
	Fairbanks & Co., E. & F. (*See* Fairbanks, Franklin, assignor.)					
	Same.....(*See* Fairbanks & Spencer, assignors.)					
186,122	Fairbanks, Franklin, assignor to E. & F. Fairbanks & Co., Saint Johnsbury, Vt. Scale-beam	Jan. 9, 1877	307	94	11	58
195,112	Fairbanks, Franklin, and L. G. Spencer, assignors to E. & T. Fairbanks & Co., Saint Johnsbury, Vt. Platform-scales	Sept. 11, 1877	370	111	12	460
198,364	Fairbanks, Franklin, Saint Johnsbury, Vt. Device for weighing samples of grain	Dec. 18, 1877	682	208	12	1000
198,365	Same.....Adjusting device for weighing-scales	Dec. 18, 1877	683	208	12	1000
	Fairbanks, Henry B. (*See* Coffin, Isaac S., assignor.)					
186,002	Fairchild, Curtiss T., assignor to Burrell, Ives & Co., Salisbury, N. Y. Making hoops for cheese-boxes	Jan. 9, 1877	194	59	11	43
198,094	Faircloth, Francis M., jr., Jersey City, N. J. Sash-fastener	Dec. 11, 1877	388	121	12	1011
189,850	Fairfield, Hadley P., Boston, Mass. Nailing-machine for boots and shoes	Apr. 24, 1877	877	268	11	697
189,851	Same.....same	Apr. 24, 1877	879	268	11	697
	Fairlamb, George A., *et al.* (*See* Pruner, David I., assignor.)					
	Fairman, Charles M., *et al.* (*See* Gracey, Robert, assignor.)					
7,750	Fairman, James, New York, N. Y. Piano attachment.....(Reissue)	June 19, 1877	849	256	11	1104
189,441	Same.....Hollow support for pianos	Apr. 10, 1877	434	137	11	623
198,727	Same.....Piano-support	Dec. 25, 1877	1051	320	12	1122
186,668	Fairweather, William, Sussex, New Brunswick. Attaching sleigh-thills	Jan. 30, 1877	872	269	11	100
198,539	Fajen, Gustav, Milwaukee, Wis. Piston water-meter	Dec. 25, 1877	865	263	12	1095
192,496	Falcini, Henry, Cambridge, Mass. Umbrella	June 26, 1877	1028	310	11	1140
	Falconer, Joseph H. (*See* Lucas, Joseph F., assignor.)					
189,442	Fales, Ellis C., Foxborough, Mass. Clasp for skirt and stocking supporters	Apr. 10, 1877	434	137	11	623
195,998	Fales, Levi S., Cambridgeport, Mass. Treating gas-liquor for ammonia salts	Oct. 9, 1877	321	90	12	614
194,082	Falk, Louis, Morrisania, N. Y. Fire-escape	Aug. 14, 1877	300	90	12	282
194,663	Same.....Sectional folding flower-stand	Aug. 28, 1877	898	268	12	378
197,260	Fallin, Henry C., Grangeville, Cal., assignor of one-half interest to V. Gant. Windmill	Nov. 20, 1877	563	166 / 167	12	857
185,902	Fallows, James, Philadelphia, Pa. Apple-corer	Jan. 2, 1877	89	27	11	20
	Faloon, Isaac. (*See* Johns & Faloon.)					
	Faloon, Matthew. (*See* Iseminger, Daniel H., assignor.)					
	Fancher, John E. (*See* Alley & Fancher.)					
191,949	Fanning, David H., Worcester, Mass. Skirt-supporting corset	June 12, 1877	429	133	11	138
196,521	Fanton, Henry N., Danbury, Conn. Machine for separating fur	Oct. 30, 1877	894	258	12	722
187,112	Farciot, Charles O., San Francisco, Cal. Carpenters' gage	Feb. 6, 1877	187	61	11	228
	Farden, Thomas J. (*See* Eberly, David B., assignor.)					
	Fargo, Charles E., *et al.* (*See* White, Hugh, assignor.)					
	Fargo, Samuel M., *et al.* (*See* White, Hugh, assignor.)					
191,950	Fargue, Leon, Paris, France. Fountain-pen	June 12, 1877	430	133	11	1038
187,610	Faries, Robert, assignor to W. B. Chambers, W. J. Quimlan, and J. E. Bering, Decatur, Ill. Check-rower for corn-planters	Feb. 20, 1877	695	216	11	315
196,573	Faris, Augustus W., Red Sulphur Springs, W. Va. Putter-mold	Oct. 30, 1877	945	273	12	729
194,664	Farley, Cyrus H., Port and, Me. Valve or regulator for flexible tubes	Aug. 28, 1877	899	268	12	379
191,127	Farley, Frank, and J. B. Blackwood, Keota, Iowa. Agricultural steam-cooker	May 22, 1877	1048	314	11	907
	Farley, Henry W. (*See* Richards, Marcius C., assignor.)					
190,299	Farley, Henry W., and M. C. Richards, Oswego, Ill. Tub, pail, cask, &c	May 1, 1877	184	55	11	770
194,665	Farmer, Andrew H., Oak Level, Va. Colter and plow-stock	Aug. 28, 1877	899	268	12	379
186,417	Farmer, James C., Providence, R. I., assignor of one-half interest to J. W. White, Dedham, Mass. Exhaust-pipe for locomotives	Jan. 23, 1877	630	192	11	118
192,243	Farmer, John H., Richmond, Ind. Dropping attachment to corn drills or planters	June 19, 1877	753	230	11	1093
	Farmer, John S., *et al.* (*See* Livesey, Edwards & Jeffreys, assignors.)					
	Farmer's Friend Manufacturing Company. (*See* Allison, Joseph W., assignor.)					
7,576	Farnam, Harriet A., South Bend, Ind. Fly-trap.....(Reissue)	Mar. 27, 1877	1073	331	11	549
	Farner, Conrad. (*See* Klinglesmith, John F., assignor.)					
197,462	Farnham, Asa M., assignor of one-half interest to P. H. Hale; said Farnham and Hale assignors of one-third interest to L. Buxbaum, Chicago, Ill. Heating ovens by steam	Nov. 27, 1877	783	233	12	899
191,414	Farnham, Frank G., Hawley, Pa. Shoe-fastening	May 29, 1877	1326	402	11	954
191,415	Same.....same	May 29, 1877	1327	403	11	954

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page
195,355	Farnham, Frank G., Hawley, Pa. Glove-fastening	Sept. 18, 1877	621	184	12	503
7,704	Farnham, J. M., assignor to Woven Wire Mattress Company, Hartford, Conn. Bedstead-frame (Reissue)	May 29, 1877	1445	434	11	966
194,590	Farnham, Moses P., Kanawha, Cal. Stove-pipe drum	Aug. 28, 1877	834	248	12	369
	Farnsworth, George C. (*See* Crocker & Farnsworth.)					
	Same (*See* Thorne & Farnsworth.)					
	Farnsworth, George L. (*See* Thorne, George L., assignor.)					
198,590	Farnsworth, Loring, assignor of one-half interest to W. F. Wright, Nashua, N. H. Nail-setting machine for boots and shoes	Dec. 25, 1877	907	277	12	1103
	Farnsworth, William. (*See* Coockerly, Charles E., assignor.)					
188,788	Farnum, William C., assignor of one-half interest to L. Wilder, Hoosick Falls, N. Y. Lawn-mower	Mar. 27, 1877	847	257	11	518
188,732	Farquhar, Arthur B., York, Pa. Plow	Mar. 27, 1877	781	240	11	510
197,024	Same Grain-separator	Nov. 13, 1877	303	90, 91	12	812
	Farquhar, David W. (*See* Farquhar, Samuel, assignor.)					
195,594	Farquhar, Samuel, assignor to self and D. W. Farquhar, Boston, Mass. Fire-proof roof	Sept. 25, 1877	865	257	12	546
193,759	Farquharson, John, Blairgourie, North Britain, assignor to G. Gibbs, T. Pitt, and W. E. Metford, Bristol, England. Breech-loading fire-arm	July 31, 1877	1258	378	12	218
	Farrand, Lester T. (*See* Webb, Thomas M., assignor.)					
185,823	Farrar, Arthur, Chicago, Ill. Button-hole attachment for sewing-machines	Jan. 2, 1877	9	4	11	10
197,928	Farrar, Daniel, Kirkville, Iowa. Feather-renovator	Dec. 11, 1877	229	70	12	987
191,126	Farrar, John, assignor of one-half interest to H. Earle, jr., Montreal, Canada. Tobacco-cutter	May 22, 1877	1048	314	11	907
193,497	Farrell, John H., Dushore, Pa. Buggy	July 24, 1877	978	296	12	169
188,613	Farrell, Thomas B., and M. D. Borst, Cobbleskill, N. Y. Thill-coupling	Mar. 20, 1877	652	202	11	484
186,288	Farrington, Charles B., Philadelphia, Pa. Combined blotter and paper-clip	Jan. 16, 1877	468	144	11	86
	Farrington, Charles W. (*See* Rhoades, Edward, assignor.)					
198,366	Farrington, DeWitt C., Lowell, Mass. Barrel-shifting mechanism for machine-guns	Dec. 18, 1877	684	208, 209	12	1060
198,367	Same Traverse mechanism for machine-guns	Dec. 18, 1877	685	209	12	1060
198,368	Same Cartridge-feeder for machine-guns	Dec. 18, 1877	686	209	12	1061
	Farrington, James M. (*See* Allen & Farrington.)					
	Farwell, George. (*See* Riley, Alberta, assignor.)					
	Farwell, Pulaski. (*See* Elder, Joseph, assignor.)					
195,496	Fasoldt, Bernard O., Albany, N. Y. Breech-loading fire-arm	Sept. 25, 1877	774	227	12	533
7,514	Fasoldt, Charles, Albany, N. Y. Regulating watches (Reissue)	Feb. 20, 1877	774	241	11	325
192,060	Faulkner, James J., Louisville, Ky. Cultivator	June 19, 1877	567	172	11	1068
190,300	Faulkner, Oscar F. A., Mount Pleasant, Iowa. Tire-tightener	May 1, 1877	185	55	11	770
	Faulkner, William H. (*See* Janczeck, John J., assignor.)					
	Faure, Camille A. (*See* MacKie, Faure & French.)					
	Faurot, Benjamin C., trustee. (*See* Palmer, Henry L., assignor) (Reissue.)					
	Faust, G. L., *et al.* (*See* Laird, William A., assignor.)					
194,232	Fawcett, Edward W., assignor to Silver & Deming Manufacturing Company, Salem, Ohio. Press for lard, fruit, &c	Aug. 14, 1877	462	140	12	303
191,951	Fawcett, John F. W., Cedar Springs, Mich. Window-blind	June 12, 1877	431	153	11	1038
196,441	Fawcett, Rufus H., assignor of two-thirds interest to J. L. Dobson, Salisbury, Mo. Hay-loader	Oct. 23, 1877	790	228	12	697
191,128	Fawcett, William, Omaha, Nebr. Ladle for metal founding	May 22, 1877	1049	314	11	907
	Fay & Co., J. A. (*See* Bugbee, George W., assignor.)					
	Same (*See* Doane & Bugbee, assignors.)					
	Same (*See* Streit, Anton, assignor.)					
186,037	Fay, Rimmon C., Pawtucket, R. I. Screw-cutting die	Jan. 9, 1877	229	68	11	47
197,350	Fay, William W., Brookfield, Mo. Shoe	Nov. 20, 1877	656	194	12	872
192,244	Fealy, Timothy J., Boston, Mass. Cake-cutter	June 19, 1877	755	231	11	1093
	Fearey, F. T., *et al.* (*See* Bradley, James J., assignor.)					
	Fearey, Jabez, *et al.* (*See* Bradley, James J., assignor.)					
192,424	Fearon, Francis, assignor to T. Dolan and R. Williams, jr., Philadelphia, Pa. Stop-motion attachment for spooling-machines	June 26, 1877	960	288	11	1131
	Feath, James. (*See* Russell, Jasper S., assignor.)					
	Feathers, Marshall. (*See* Winchell, Ira E., assignor.)					
	Feavel, Stephen F. (*See* Franklin & Feavel.)					
196,209	Febore, Victor, F. Pouget, and G. Bonniot, Lyons, France. Mechanism for operating sewing-machines	Oct. 16, 1877	549	159	12	654
	Feely, George W. (*See* Basiger & Feely.)					
	Feely, William. (*See* Millen & Feely.)					
188,118	Feger, Hiram C., assignor of one-fourth interest to J. H. Hohart, jr., Pottstown, Pa. Car-axle box	Mar. 6, 1877	148	45	11	400
	Feick, Nickolaus. (*See* Gould & Feick.)					
195,595	Feige, Ernest, East Saginaw, Mich. Door-fastening	Sept. 25, 1877	866	257	12	546
190,202	Feistel, Ferdinand, Berlin, Prussia. Flour-bolting machine	May 1, 1877	89	25, 26	11	758
192,908	Felbel, Jacob, New York, N. Y. Device for tapping beer and other casks	July 10, 1877	373	110	12	71
193,113	Felder, Charles, New York, N. Y. Fluting-machine	July 17, 1877	585	176	12	107
193,498	Feldmier, John, Lawrence, Kans. Corn-planter	July 24, 1877	978	297	12	169
191,231	Felgner, Fredrick, Baltimore, Md. Cigar-machine	May 29, 1877	1168	350	11	932
187,611	Fell, Ambrose G., New York, assignor to W. H. Smith, Brooklyn, N. Y. Manufacturing artificial leather from woolen or vegetable fabric	Feb. 20, 1877	697		11	315
191,327	Fell, Thomas M., Brooklyn, and H. B. Bunster, New York, N. Y., assignors to selves and W. G. Smith. Utilizing by sulphide of carbon as a motive power	May 29, 1877	1252	377	11	944
	Fellows, Walter A., *et al.* (*See* Sarmiento, Ferdinand L., assignor.)					
188,789	Fellrath, Charles J., and L. Schnell, Yatesville, Tex. Photographer's bath-warmer	Mar. 27, 1877	849	257, 258	11	518
186,669	Fenn, August, New York, N. Y. Apparatus for curing tobacco	Jan. 30, 1877	873	270	11	160
195,596	Fenn, Charles A., and R. Groeninger, Saint Louis, Mo. Gas-regulator	Sept. 25, 1877	867	257	12	546
189,929	Fenner, Byron, Westfield, N. Y. Filter-rack	Apr. 24, 1877	955	292	11	708
195,113	Fenton, Emery W., assignor of two-thirds interest to S. Sweet and A. Kibling, Jamestown, N. Y. Butter-tub	Sept. 11, 1877	371	112	12	460
191,330	Fenton, John, Indianapolis, Ind. Buckle	May 29, 1877	1256	378	11	944
	Ferchland, Ernst. (*See* Kimpel & Ferchland.)					
	Ferebel, Thomas C., *et al.* (*See* Chowning, John W., jr., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
189,715	Fergus, James, assignor of two-thirds interest to G. H. Colket, Philadelphia, Pa. Injector	Apr. 17, 1877	718	221	11	668
197,351	Ferguson, Charles H., Cambridge, N. Y. Torsion-spring for vehicles	Nov. 20, 1877	657	195	12	872
197,622	Ferguson, Charles J., Philadelphia, Pa. Lock-hinge	Nov. 27, 1877	952	283	12	923
189,443	Ferguson, Daniel P., Jonesborough, Ga. Plow	Apr. 10, 1877	435	137	11	623
	Ferguson, James. (*See* Ferguson, Matthew W. and J.)					
194,767	Ferguson, James, assignor of two-thirds interest to J. Turner and J. H. Ferguson, Bridgewater, Mass. Machine for cutting horseshoe-nail blanks	Sept. 4, 1877	9	3	12	402
194,768	Same.....Horseshoe-nail plate	Sept. 4, 1877	10	3	12	402
194,769	Same.....Machine for pointing horseshoe-nails	Sept. 4, 1877	11	4	12	402
195,811	Ferguson, James C., Cross Plains, Ala. Plow	Oct. 2, 1877	117	34	12	578
	Ferguson, James H., *et al.* (*See* Ferguson, James, assignor.)					
	Ferguson, James H. (*See* Hunting, George H., assignor.)					
189,348	Ferguson, James H., Leavenworth, Kans. Photographic burnisher	Apr. 10, 1877	344	119	11	611
192,245	Ferguson, Matthew, W., and J., Philadelphia, Pa. Ventilating bulk-windows	June 19, 1877	756	231	11	1093
196,078	Ferguson, Samuel T., assignor to Monitor Plow Works, Minneapolis, Minn. Hand corn-planter	Oct. 16, 1877	412	119	12	635
190,751	Ferguson, Thomas, Parkersburg, Iowa. Safety attachment for pocket-books	May 15, 1877	677	201	11	830
197,726	Ferguson, William, assignor of one-half interest to H. L. Kuhns, Canton, Ohio. Belt-fastener	Dec. 4, 1877	19	6	12	949
192,246	Ferguson, William P., Brooklyn, N. Y. Shawl-strap	June 19, 1877	757	231	11	1093
194,813	Ferguson, William W., Healdsburg, Cal. Fruit-drier	Sept. 4, 1877	58	19	12	408
193,698	Ferris, Allen D., Blakeley, Minn. Reciprocating churn	July 31, 1877	1203	360	12	210
191,328	Ferris, Frank A., New York, N. Y. Metallic seal	May 29, 1877	1254	378	11	944
189,616	Ferris, George H., Brooklyn, N. Y. Lamp-stove	Apr. 17, 1877	622	192	11	636
186,237	Ferris, Hiram R., Cleveland, Ohio. Hand-truck	Jan. 16, 1877	424	130	11	80
190,020	Same.....same	Apr. 24, 1877	1051	320	11	720
193,401	Same.....same	July 24, 1877	887	271	12	156
186,467	Ferris, Laning L., New York, N. Y. Electric train-signal	Jan. 23, 1877	678	208	11	194
188,007	Ferris, Sherwood B., Brooklyn, N. Y. Corset	Mar. 6, 1877	50	14	11	387
195,755	Same.....same	Oct. 2, 1877	64	19	12	570
188,347	Ferron, Charles A., Paris, France, assignor to G. R. Tuttle, New York, N. Y. Lamp-burner	Mar. 13, 1877	387	121	11	439
197,025	Ferry, Daniel J., assignor of one-half interest to J. I. Rogers, Philadelphia, Pa. Leaf-turner	Nov. 13, 1877	306	91	12	812
	Ferry, William M. (*See* Dixon, George W., assignor.)					
7,455	Fesca, Albert, Berlin, Prussia. Centrifugal machine for draining sugar, &c. (Reissue)	Jan. 2, 1877	188	58	11	33
187,527	Fesler, James C., and G. D. Pettingell, Kings, Ill. Harvester-guard finger	Feb. 20, 1877	630	192	11	304
193,402	Fest, William P., Chicago, Ill. Canal-boat	July 24, 1877	889	271	12	156
185,903	Fette, William, Milwaukee, Wis. Sleeping-car berth	Jan. 2, 1877	89	27	11	20
191,416	Fetter, David F., New York, N. Y. Can-opener	May 29, 1877	1327	403	11	954
193,699	Same.....Cart-scales	July 31, 1877	1204	361	12	210
190,301	Fetzer, John, Rolla, Mo. Paint-composition	May 1, 1877	185		11	770
187,113	Feyh, Henry, assignor to S. W. Johnson, New York, N. Y. Feed-mechanism for sewing-machines	Feb. 6, 1877	187	61, 62	11	228
189,716	Same.....Feed-dog for sewing-machines	Apr. 17, 1877	719	221	11	668
	Fichtenmayer, Martin P. (*See* Leuchsenring, Robert, assignor.)					
194,591	Fickett, Albert, assignor of one-half interest to S. Dobbs, Rochester, N. Y. Wood-grinder for paper-pulp	Aug. 28, 1877	835	248	12	369
194,514	Fickett, Franklin H., assignor of one-half interest to J. W. Reid, Chicago, Ill. Car-coupling	Aug. 28, 1877	768	228	12	359
187,528	Fickett, Henry E., Arlington, N. J. Frame house	Feb. 20, 1877	630	192	11	304
186,202	Field, Charles H., Providence, R. I. Shirt-stud	Jan. 16, 1877	395	121	11	76
192,247	Same.....Engraving-machine	June 19, 1877	757	232	11	1093
	Field, Edward S., *et al.* (*See* Clements, George S., assignor.)					
	Field, Edward. (*See* Warren & Field.)					
194,666	Field, Edward, Westminster, Great Britain. Electrical anti-incrustator for steam-generators	Aug. 28, 1877	900	269	12	379
187,463	Field, Edwin S., Hartford, Conn. Spring-bed bottom	Feb. 20, 1877	559	173	11	296
	Field, Frederick. (*See* Tuttle, Hiram H., assignor.)					
	Field, George F. (*See* Gue, Albert F., assignor.)					
189,340	Field, Henry C., Providence, R. I. Machine for making toe-calks	Apr. 10, 1877	345	111	11	611
	Field, James E. (*See* Holton & Field.)					
	Field, James A. (*See* Powers, Theodore D., assignor.)					
186,238	Field, John A., assignor to J. I. Case & Co., Racine, Wis. Traverse-pinion for horse-powers	Jan. 16, 1877	425	130	11	80
191,576	Field, John A., Racine, Wis. Match-safe	June 5, 1877	63	19	11	986
186,084	Field, Joseph S., Brooklyn, N. Y. Sheet-metal can	Jan. 9, 1877	271	82	11	53
186,239	Same.....same	Jan. 16, 1877	425	130	11	80
187,260	Same.....same	Feb. 13, 1877	342	109	11	261
194,962	Field, Lyman, Medina, N. Y. Screw-cutting machine	Sept. 11, 1877	217	67	12	438
194,233	Field, Mason G., assignor of one-half interest to J. Finegan, Syracuse, N. Y. Apparatus for constructing sewers, &c.	Aug. 14, 1877	463	140	12	303
	Field, Moses W., *et al.* (*See* Pyke, James, assignor.)					
189,717	Field, Stephen D., San Francisco, Cal. District telegraph signal-box	Apr. 17, 1877	720	221, 222	11	668
	Field Tack Company, Albert. (*See* Austin, Lloyd, assignor) (Reissue.)					
	Field, William H. (*See* Bailey & Burdick, assignors) (Reissue.)					
	Field, William H., *et al.* (*See* Daley & Treat, assignors) (Reissue.)					
	Field, William H. (*See* Richardson, George M. and C. C., assignors (Reissue.)					
197,547	Field, William H., Taunton, Mass. Nail-plate feeder	Nov. 27, 1877	872	259, 260	12	912
189,881	Fieldhouse, Joseph, Chicago, Ill. Pipe-welding tongs	Mar. 27, 1877	941	287	11	531
	Fieldman, Albert H., *et al.* (*See* White, Orpheus, assignor.)					
187,114	Fields, Charles C., Abingdon, assignor to self and V. Doriot Washington County, Va., W. W. Davis and I. M. Thomas, Bristol, Tenn. Adding-pencil	Feb. 6, 1877	189	62	11	228
196,649	Fields, Daniel G., assignor of three-fourths interest to J. and T. White and A. Hunter, Harrisville, Tex. Earth-auger	Oct. 30, 1877	1020	296	12	740
	Fiero, Christopher, *et al.* (*See* Wallis, Theodore, assignor.)					
192,248	Fiester, John U., Winchester, Ohio. Lifting-jack	June 19, 1877	763	232	11	1093
198,369	Same.....Gate	Dec. 18, 1877	687	209	12	1061
	Fifield, George A., *et al.* (*See* Van Wie, James J., assignor.)					
188,614	Filbert, Lewis S., Philadelphia, Pa. Concrete pavement	Mar. 20, 1877	652		11	484

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Fillman, H. J., *et al.* (*See* Phelps, Ira M., assignor.)					
198,591	Filman, Peter, Wentworth County, Canada. Metallic sleigh-knee	Dec. 25, 1877	909	278	12	1103
198,195	Finch, John A., Indianapolis, Ind. Opera-glass	Dec. 18, 1877	513	158	12	1035
189,207	Finch, Smith H., New York, N. Y. Railway-switch	Apr. 3, 1877	171	59	11	582
	Finck, Gustav. (*See* Boecker & Finck.)					
	Finck, Julius. (*See* Will & Finck.)					
	Finegan, James. (*See* Field, Mason G., assignor.)					
197,623	Finnegan, John, Ann Arbor, Mich. Plow	Nov. 27, 1877	953	283	12	923
193,235	Finney, Henry E., Youngstown, Ohio. Car-ventilator	July 17, 1877	705	216	12	123
197,261	Finney, Joseph R., assignor to self and L. S. Smith, Pittsburg, Pa. Dental plugger	Nov. 20, 1877	564	167	12	858
192,644	Firman, Leroy B., Chicago, Ill. District-telegraph signal-box	July 3, 1877	94	27	12	25
	Firmenich, Frank. (*See* Firmenich, Joseph and G., assignors.)					
	Firmenich, George. (*See* Firmenich, Joseph and G.)					
191,004	Firmenich, Joseph and G., assignors of one-third interest to F. Firmenich, Buffalo, N. Y. Steam-generator	May 22, 1877	935	277	11	893
	Firmin, George J. (*See* Forster & Firmin.)					
189,208	Fischer, Adolph, New York, N. Y. Burial casket	Apr. 3, 1877	173	59	11	582
192,158	Fischer, Frederick, New York, N. Y. Link-motion for steam-engines	June 19, 1877	665	203	11	1081
187,369	Fischer, George, G. F. Kek, and J. B. Sharp, New York, N. Y. Shuttle for narrow ware looms	Feb. 13, 1877	451	142	11	275
	Fischer, Louis. (*See* Fowler, Lewis, Smith & Fischer.)					
7,706	Fischer, Louis, Brooklyn, N. Y., assignor to A. H. Watkins, Boston, Mass. Vapor-burner (Reissue)	May 29, 1877	1447	435	11	967
7,646	Fischer, Philipp, New York, N. Y., assignor of one-half interest to H. Lange, jr. Manufacture of gaiter boots and shoes (Reissue)	May 1, 1877	294	86	11	784
196,079	Fischer, Philipp, New York, N. Y. Crimping apparatus for boots and shoes	Oct. 16, 1877	414	120	12	635
196,080	Same.....Gaiter-boot	Oct. 16, 1877	414	120	12	635
190,481	Fischer, William G., Brooklyn, N. Y. Toy cap-exploder	May 8, 1877	386	112	11	804
194,234	Fischle, P. Julius, Philadelphia, Pa. Horse-hitch	Aug. 14, 1877	465	141	12	303
198,012	Fischlowitz, Salomon, New York, N. Y. Turning angular bodies having convex surfaces	Dec. 11, 1877	312	96	12	1000
186,240	Fish, John, Summit, N. J. Variable cut-off valve for steam-engines	Jan. 16, 1877	426	131	11	81
196,207	Same.....Compound engine	Oct. 16, 1877	517	159	12	654
	Fish, Myron. (*See* Winsor, Joseph S., assignor.)					
	Fish, Peter. (*See* Schmitt, Peter J., assignor.)					
187,000	Fish, Warren L., Newark, N. J. Bobbin-winder for sewing-machines	Feb. 6, 1877	84	29	11	213
	Fish, Winslow P. (*See* Scofield, Charles H., assignor.)					
195,999	Fishback, John, Indianapolis, Ind. Apparatus for treating hides and skins	Oct. 9, 1877	322	90, 91	12	614
189,882	Fisher, Anthony, New York, N. Y. Bottle-washer	Mar. 27, 1877	942	287	11	531
192,425	Fisher, Augustus A., and S. H. Lucas, Santa Fé, N. Mex. Combined push-pin and watch-key	June 26, 1877	961	288	11	1132
	Fisher, Charles K., *et al.* (*See* Fisher, William H., assignor.)					
189,617	Fisher, Christine, Salisbury, N. C. Table-easel	Apr. 17, 1877	623	192, 193	11	656
189,892	Fisher, Clark, Trenton, N. J. Cast-iron anvil	Apr. 24, 1877	923	281	11	703
189,618	Fisher, Daniel M., and S. E. Warren, New York, N. Y. Wash-board	Apr. 17, 1877	625	193	11	656
	Fisher, Edwin S. (*See* Evans, Nathaniel, assignor.)					
188,505	Fisher, Edwin S., Boston, Mass. Educational toy	Mar. 20, 1877	558	172	11	470
196,208	Fisher, Ezra E., assignor to self and C. Wood, Brattleborough, Vt. Oscillating chair	Oct. 16, 1877	548	159	12	654
188,119	Fisher, George, Toledo, Ohio. Coffee-roaster	Mar. 6, 1877	149	45	11	400
193,499	Fisher, George L., Scranton, Pa., assignor of one-half interest to H. Barry, Wilmington, Del. Clothes pounder and washer	July 24, 1877	979	297	12	169
186,468	Fisher, Henry, Canton, Ohio. Horse hay-fork	Jan. 23, 1877	678	208	11	124
185,901	Fisher, Hiram H., Allentown, Pa. Flask for casting	Jan. 2, 1877	89	27	11	20
185,905	Same.....Removing cores from molds	Jan. 2, 1877	90	28	11	20
185,906	Same.....Molding pipe	Jan. 2, 1877	91	28	11	20
189,209	Fisher, I. Melvin, Camden Point, Mo. Filling and emptying inkstands	Apr. 3, 1877	174	60	11	582
185,824	Fisher, Isaac L., Hamilton, Ohio. Feather-renovating machine	Jan. 2, 1877	10	4	11	10
195,356	Fisher, Jacob, Ottawa, Kans. Earth-auger	Sept. 18, 1877	622	184	12	504
	Fisher, J. B., *et al.* (*See* Slusser, Benjamin, assignor) (Reissue)					
198,013	Fisher, J. Hyde, Chicago, Ill. Swing	Dec. 11, 1877	313	96	12	1000
197,262	Fisher, John H., Mount Washington, Ind. Torpedo-guard	Nov. 20, 1877	566	167	12	858
190,203	Fisher, Joseph G., Grand Rapids, Mich. Butter-pail cover	May 1, 1877	90	26	11	758
188,506	Fisher, Joseph H., Chicago, Ill. Bale-tie	Mar. 20, 1877	558	172	11	470
198,592	Fisher, Joseph, S, Philadelphia, Pa. Razor-strop	Dec. 25, 1877	910	278	12	1103
186,003	Fisher, Martin L., Arkadelphia, Ark. Apparatus for raising water	Jan. 9, 1877	195	59	11	43
187,370	Fisher, Oliver P., assignor of one-half interest to J. F. Campbell, Basil, Ohio. Revolving harrow	Feb. 13, 1877	452	142	11	275
189,091	Fisher, Samuel B., Pleasant Unity, Pa. Paint composition	Apr. 3, 1877	71		11	568
191,329	Same.....Animal-trap	May 29, 1877	1255	378	11	944
189,718	Fisher, Simon P., Franklin Township, Pa. Horseshoe	Apr. 17, 1877	722	222	11	669
191,577	Fisher, Timothy L., assignor to F. S. Frost, Arlington, Mass. Easel	June 5, 1877	63	19	11	986
7,917	Fisher, Willett, Homer, N. Y. Fifth-wheel for platform-wagons (Reissue)	Oct. 16, 1877	635	183	12	666
185,907	Fisher, William H., assignor of three-fourths interest to C. K. Fisher, Selin's Grove, Pa., H. U. Kistner, and P. Moyer, jr. Sash-relishing machine	Jan. 2, 1877	92	28	11	20
198,285	Fishor, William H., and H. U. Kistner, Selin's Grove, Pa. Tobacco-pipe	Dec. 18, 1877	612	185	12	1049
193,236	Fisher, William N., assignor to Boston Forge Company, Boston, Mass. Manufacture of anchor-points	July 17, 1877	706	216	12	123
193,237	Same.....Manufacture of anchors	July 17, 1877	706	216	12	124
	Fisk, John. (*See* Davis & Fisk.)					
	Fisk, John, *et al.* (*See* Davis, Edgar P., assignor.)					
	Fisk, John J. (*See* Davis & Fisk.)					
193,151	Fiske, Daniel A., Saint Louis, Mo. Reciprocating churn	July 17, 1877	614	186	12	112
	Fitch, Ardon S. (*See* Lublinski, Robert, assignor.)					
195,922	Fitch, Charles L., assignor of one-half interest to W. J. McKenney, Cleveland, Ohio. Hose reel and carriage	Oct. 9, 1877	299	68	12	603
	Fitch, Elliot R. (*See* Wood & Fitch.)					
	Fitch, E. T., *et al.* (*See* Bristol, Charles B., assignor.)					
	Same..... (*See* Hughes, Reuben B., assignor.)					
	Same.....(*See* Schappa, Albert M., assignor.)					
	Fitch, Samuel. (*See* King, Theodore E., assignor.)					
	Fitch, W., *et al.* (*See* Bristol, Charles B., assignor.)					
	Same.....(*See* Hughes, Reuben B., assignor.)					
	Same.....(*See* Schappa, Albert M., assignor.)					

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
189,092	Fitch, William H., Brooklyn, N. Y. Butter-dish	Apr. 3, 1877	71	26	11	568
	Fithian, Isaac N. (*See* Fithian, Sebastian A. and I. N.)					
194,667	Fithian, Sebastian A. and I. N., Karns City, Pa. Device for lowering fluids into oil-wells	Aug. 28, 1877	901	269	12	379
	Fitz, Charles. (*See* Thompson, John C., assignor.)					
190,479	Fitz Gerald, Walter H., Brooklyn, N. Y. Shutter bower and fastener	May 8, 1877	385	112	11	804
	Fitzgerald, John. (*See* Palm & Fitzgerald.)					
194,515	Fitzgerald, Lawrence J., Cortland, N. Y. Vehicle-brake	Aug. 28, 1877	770	228	12	360
194,516	Same.....Vehicle-top	Aug. 28, 1877	771	229	12	360
192,645	Fitzgerald, Walter S., Boston, Mass. Skiving-machine	July 3, 1877	96	28	12	25
	Fitzgerrall, James J. (*See* Fox, Thomas, assignor.)					
190,480	Fitzgerrell, Monroe M., Jefferson County, Ill. Grain-drill	May 8, 1877	385	112	11	804
189,930	Fitzgibbons, Patrick, assignor of one-half interest to R. E. Stone, Oswego, N.Y. Steam-boiler	Apr. 24, 1877	956	292	11	708
190,568	Fitzhugh, Lee M., Indianapolis, Ind. Tobacco-caddy	May 8, 1877	469	139	11	815
	Fitzpatrick, Benjamin. (*See* Nolan & Fitzpatrick.)					
193,646	Fitz Patrick, John J., Philadelphia, Pa. Attachment to knitting-machines for re-enforcing the knee-caps of stockings	July 31, 1877	1153	345	12	203
	Fitzpatrick, Luke. (*See* Schinneller & Fitzpatrick.)					
	Fitzsimmons, Andrew M. R. (*See* Moss & Abbott, assignors.)					
197,263	Fitzsimons, Thomas A., Benicia, Cal. Device for tilting cruets	Nov. 20, 1877	566	167	12	858
191,232	Fixary, Edward, assignor of one-half interest to A. C. Janin, New Orleans, La. Air-cooling apparatus	May 29, 1877	1170	350, 351	11	932
192,497	Same.....Ice-machine	June 26, 1877	1029	310	11	1140
187,569	Fixier, Jules A., Brooklyn, N. Y. Fire-escape	Feb. 20, 1877	653	203	11	309
193,326	Fixmer, John P., and C. A. Janssen, Springfield, Ill.; said Janssen assignor to said Fixmer. Medicinal compound	July 24, 1877	816		12	147
	Flack, D. Hudson. (*See* Holloway & Stineman, assignors.)					
	Flading, John. (*See* Clark, George W., assignor.)					
	Flagg, George H. P. (*See* Fullerton, George A., assignor.)					
	Flagg, Isaiah H. (*See* Fowler & Flagg.)					
196,522	Flagg, J. Melledge, Providence, R. I. Heddle for looms	Oct. 30, 1877	895	258	12	722
191,952	Flagg, William F., Bloomington, Ill. Heating and ventilating buildings	June 12, 1877	431	133	11	1038
195,708	Flagler, Thomas, Baltimore, Md. Fire-extinguisher	Oct. 2, 1877	17	5	12	563
196,442	Same.....Mattress	Oct. 23, 1877	791	228	12	697
188,615	Flaherty, William, Ravanna, Mo. Check-rower	Mar. 20, 1877	653	202	11	484
7,691	Flanagan, Francis P., Springfield, Mass., assignor to J. W. Corey, Newark, N. J. Hat (Reissue)	May 22, 1877	1140	342	11	920
189,852	Flanders, Calvin, Bronson, Mich. Sack-scales	Apr. 24, 1877	880	268	11	697
188,008	Flanders, Lucian B., Philadelphia, Pa. Machine for turning locomotive crank-pins	Mar. 6, 1877	51	14, 15	11	387
197,113	Flanders, William G., Boston, Mass. Steam cooking-kettle	Nov. 13, 1877	402	118	12	826
198,095	Same.....same	Dec. 11, 1877	389	122	12	1011
194,551	Flannery, Dennis, Brooklyn, N. Y. Composition for surfacing leather	Aug. 28, 1877	802		12	364
189,350	Fleener, Thomas T., Arlington, Ind. Ditching-machine	Apr. 10, 1877	346	111	11	611, 612
192,365	Fleischmann, Julius W., Williamsburg, N. Y. Glass for picture-frames	June 26, 1877	906	272	11	1124
	Fleischmann, Louis. (*See* Mayerhofer, Josef, assignor.)					
189,891	Fleming, Francis C., New York, N. Y. Sheet-metal can	Apr. 24, 1877	922	281	11	703
189,444	Fleming, James, Brooklyn, N. Y. Boot and shoe	Apr. 10, 1877	436	137	11	623
	Fleming, John. (*See* Keeley & Fleming.)					
193,114	Fleming, John, Pittsburg, Pa. Oil-can	July 17, 1877	586	177	12	107
194,592	Fleming, Peter F., Salisbury, Mo. Hay raker, loader, and stacker	Aug. 28, 1877	836	249	12	369
196,523	Same.....Combined sulky, harrow, and cultivator	Oct. 30, 1877	895	258, 259	12	722
190,569	Fleming, William S., and A. Burns, San Francisco, Cal. Water-filter	May 8, 1877	470	139	11	815
187,115	Fletcher, Charles, Williamsburg, N. Y. Cigar-box	Feb. 6, 1877	190	62	11	228
186,818	Fletcher, George, Fillmore, assignor of one-half interest to W. Foote, Hume, N. Y. Earth-auger	Jan. 30, 1877	1014	315	11	180
191,666	Fletcher, George Hume, assignor of one-half interest to J. S. Bishop, Fillmore, N. Y. Pipe-wrench	June 5, 1877	147	46	11	996
190,570	Fletcher, George E., assignor of one-half interest to S. W. Lowell, Fillmore, N. Y. Hame for harness	May 8, 1877	470	140	11	816
	Fletcher, John. (*See* Stott, Asa I., assignor.)					
192,116	Fletcher, Karl, Boston, Mass., assignor to self and D. N. Pickering, Marshalltown, Iowa. Hydraulic elevator	June 19, 1877	619	188, 189	11	1075
196,515	Fletcher, Moore R., Concord, N. H. Apparatus for making pulp or paper stock from wood, &c	Oct. 23, 1877	873	252	12	707
198,593	Fletcher, Thomas, Warrington, England, assignor to G. B. Snow, T. G. Lewis, and J. E. Robie, Buffalo, N. Y. Blow-pipe	Dec. 25, 1877	910	278	12	1103
195,268	Flint, Edwin H., Cincinnati, Ohio. Mainspring attachment for watch-barrel	Sept. 18, 1877	546	159	12	492
	Flint, Edwin R. (*See* Conkey, Jason A., assignor.)					
193,238	Flint, George T., Winona, Minn. Hot-air furnace	July 17, 1877	707	216, 217	12	124
	Flint, Henry. (*See* Stoddard & Flint.)					
194,814	Flint, Henry, Keokuk, Iowa. Hydrant	Sept. 4, 1877	59	19	12	408
	Flint, John G., jr. (*See* Sterle, Ole O., assignor.)					
192,327	Flocke, Robert, Newark, N. J., assignor to R. Neumann & Co., New York, N. Y. Lock for satchels, &c	June 26, 1877	868	262	11	1119
198,287	Flood, Henry S., San Francisco, Cal. Overalls	Dec. 18, 1877	614	186	12	1050
189,720	Flood, William, assignor to S. Roebuck, New York, N. Y. Window-screen	Apr. 17, 1877	723	222	11	669
	Flood, William M. (*See* McCarthy, William, assignor.)					
193,152	Florance, James L., Plano, Tex. Riding-plow	July 17, 1877	615	186	12	112
	Florence Machine Company. (*See* Goodell, Dexter W., assignor.)					
	Flower, Frederick W. (*See* Hallas, Flower & Pearson.)					
196,650	Flower, George H., Chicago, Ill. Lubricator	Oct. 30, 1877	1021	297	12	740
189,445	Flower, James, Detroit, Mich. Chuck for holding pipe-fittings	Apr. 10, 1877	436	138	11	623
189,719	Same.....Tap and die	Apr. 17, 1877	723	222	11	669
196,000	Same.....Fire-hydrant	Oct. 9, 1877	323	91	12	614
	Flower, Philip W., *et al.* (*See* Roussel, Delaugre & Robin, assignors) (Reissue)					
	Flower, Wickham, *et al.* (*See* Roussel, Delaugre & Robin, assignors) (Reissue)					
186,819	Floyd, George, Cincinnati, Ohio. Fire-alarm signal-box	Jan. 30, 1877	1015	315	11	180
189,093	Floyd, William B., Kansas City, Mo. Treadle	Apr. 3, 1877	72	26	11	569
195,597	Flynn, John, and C. A. Brown, assignors to C. A. Brown, Troy, N. Y. Combined spool-holder and collar-box	Sept. 25, 1877	868	258	12	547
191,129	Fockler, Charles, Dubuque, Iowa. Carriage-top	May 22, 1877	1050	315	11	907

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
188,507	Foerste, Albert, Berlin, Prussia. Album	Mar. 20, 1877	559	172	11	470
187,261	Fogelberg, Carl, Boston, Mass. Pipe-organ	Feb. 13, 1877	343	109	11	261
192,061	Same.....Organ-pipe	June 19, 1877	569	172	11	1068
194,139	Fogelstrand, Otto F., New Britain, assignor to Hart, Bliven & Meade Manufacturing Company, Kensington, Conn. Cupboard-latch	Aug. 14, 1877	377	112	12	291
197,026	Same.....Sash-fastener	Nov. 13, 1877	308	92	12	812
198,286	Fogerty, George F., assignor to self and F. Somes, Boston, Mass. Faucet	Dec. 18, 1877	613	185	12	1049
	Fogg, G. W., *et al.* (*See* Buckminster, Prescott S., assignor.)					
	Fogg, Hiram H. (*See* Dole, John, assignor.)					
7,891	Fogg, Lucius A., Parker City, Pa. Vehicle-spring (Reissue)	Sept. 18, 1877	709	209	12	516
187,262	Same.....same	Feb. 13, 1877	344	109	11	261
186,241	Fogg, Nathan H., Boston, Mass. Safety-check for elevators	Jan. 16, 1877	427	131	11	81
189,028	Folant, William C., Ellenville, N. Y. Handle and catch combined for sliding-doors	Apr. 3, 1877	18	6	11	561
190,428	Foley, Andrew, assignor of two-thirds interest to J. J. Harding and J. A. McWaid, Atlantic, Iowa. Horse-collar pad	May 8, 1877	332	97	11	798
192,750	Foley, James, Montreal, Canada. Filter	July 3, 1877	189	55	12	39
193,443	Same.....Tanning solution	July 24, 1877	926		12	162
	Follansbee, George, *et al.* (*See* Heunsch, Rudolph, assignor.)					
189,446	Follett, Joseph L., New York, N. Y. Take-up device for sewing-machines	Apr. 10, 1877	437	138	11	623
189,931	Same.....Sewing-machine	Apr. 24, 1877	957	293	11	708
192,751	Same.....Spring-gun	July 3, 1877	190	55	12	39
196,210	Same.....Take-up mechanism for sewing-machines	Oct. 16, 1877	549	160	12	654
187,840	Follette, Sarah F., Boston, Mass. Underwaist	Feb. 27, 1877	944	293	11	356
188,616	Same.....Corset	Mar. 20, 1877	654	202	11	484
195,114	Folsom, Andrew, Barrington, R. I. Water and wind wheel	Sept. 11, 1877	372	112	12	460
186,996	Folsom, George F., Boston Highlands, Mass. Snow-guard for roofs	Feb. 6, 1877	81	28	11	212, 213
190,204	Same.....same	May 1, 1877	91	26	11	758
198,594	Folsom, Hannibal, Stoughton, Mass. Wax-thread sewing-machine	Dec. 25, 1877	911	278	12	1108
196,792	Folsom, Norton, Boston, Mass. Water-closet	Nov. 6, 1877	52	16	12	768
192,159	Foltz, Benjamin, Rockford, Ill. Vehicle-pole tip	June 19, 1877	666	204	11	1081
192,426	Foltz, Daniel A., New Ringgold, and A. Miller, Ringtown, Pa.; said Miller assignor to said Foltz. Shears	June 26, 1877	962	288	11	1132
198,096	Folwell, Samuel, Memphis, Tenn. Brick-mold	Dec. 11, 1877	390	122	12	1011
	Fonseca, David L. (*See* Rundle, James N., assignor.)					
193,239	Fontayne, Albert, assignor of one-half interest to H. E. Randell, Cincinnati, Ohio. Curtain-fixture	July 17, 1877	708	217	12	124
	Foos, John. (*See* Terrell & Foos.)					
190,841	Foot, William, Fillmore, N. Y. Vehicle-spring	May 15, 1877	753	223	11	860
191,130	Foote, Theodore M., Brooklyn, N. Y. Metrical telegraph-system	May 22, 1877	1051	315	11	908
	Foote, William. (*See* Fletcher, George, assignor.)					
191,756	Forbes, Henry D., Cambridge, Mass. Spinning-top	June 12, 1877	239	76	11	1014
192,909	Forbes, John, Dartmouth, Nova Scotia. Electrical apparatus to indicate overstrain or weakness in roofs, bridges, or other structures	July 10, 1877	374	111	12	71
198,289	Forbes, Paul S., New York, N. Y. Coiled-tube rotary condenser	Dec. 18, 1877	615	186	12	1050
193,793	Forbes, William H., Baltimore, Md. Port-hole protector for ships	July 31, 1877	1297	389	12	223
	Force, Christian. (*See* Knettle & Force.)					
193,601	Ford, Charles S., Philadelphia, assignor of one-half interest to J. J. Krodel, Columbia, Pa. Gas-burner	July 31, 1877	1102	330	12	196
196,793	Ford, Charles S. and S. A., Salem, assignors to C. W. Perkins, Peabody, Mass. Machine for scouring and dressing sheep and goat skins	Nov. 6, 1877	53	17	12	768
	Ford, De Witt. (*See* Hodge, Ephraim C., assignor.)					
195,115	Ford, Edward L., assignor to R. Hoe & Co., New York, N. Y. Duplex printing-machine and folding apparatus combined	Sept. 11, 1877	373	112, 113	12	460
7,671	Ford, George A., Cleveland, Ohio. Pulley-block (Reissue)	May 8, 1877	582	172	11	830
187,529	Ford, Jerome B., Burlington, assignor of one-half interest to W. E. Simonds, Collinsville, Conn. Upsetting bolt-heads	Feb. 20, 1877	621	192	11	305
	Ford, Samuel A. (*See* Ford, Charles T. and S. A.)					
188,734	Ford, Thomas B., Newburg, N. Y. Rock-drilling machine	Mar. 27, 1877	783	241	11	510
189,853	Same.....Tripod for rock-drills	Apr. 24, 1877	881	267	11	698
194,026	Fordon, John A., Bay City, and J. E. Thomas, Wenona, Mich. Boiler-cleaner	Aug. 14, 1877	256	76	12	276
196,211	Fordtran, Eugene H., Flatonia, Tex. Insect-destroyer	Oct. 16, 1877	551	160	12	654
193,367	Forehand, Sullivan, and H. C. Wadsworth, Worcester, Mass. Revolving fire-arm	July 24, 1877	857	262	12	152
194,948	Forker, William, Emlenton, Pa. Sand-pump	Sept. 4, 1877	192	59	12	426
191,331	Forman, Harvey W., Golden City, Colo. Pen-rack	May 29, 1877	1256	379	11	944
186,552	Forman, Sands, Jersey City, N. J. Railway joint	Jan. 23, 1877	756	232	11	135
	Forney, James. (*See* Bishop, Joshua, assignor.)					
190,302	Forney, John M., Victor, Iowa. Draft-equalizer	May 1, 1877	186	56	11	770
	Forrest, John. (*See* Wilson, James L., assignor.)					
193,153	Forster, John, Coal Valley, Ill. Lamp-bracket	July 17, 1877	616	187	12	112
196,212	Forster, Thomas A. D., and G. J. Firmin, Norristown, Pa. Process and apparatus for amalgamating ores	Oct. 16, 1877	552	160	12	654
190,482	Forster, William E., and W. C. Tolles, Nashua, N. H. Boot and shoe sole trimming machine	May 8, 1877	387	113	11	804
7,887	Forsyth, James B., Boston, Mass., assignor to self and J. H. Cheever, New York, N. Y. Lining hose and tubes with india-rubber (Reissue)	Sept. 18, 1877	702		12	515
	Forsyth, Joseph. (*See* Hill & Forsyth.)					
	Fortney, Henry M. (*See* Eaton & Fortney.)					
191,233	Fosburgh, Calvin E., Louisville, Ky. Canopy-top for children's carriages	May 29, 1877	1171	351	11	933
186,928	Foss, Charles H., Watseka, Ill. Corn-planter	Feb. 6, 1877	8	3	11	201
191,418	Foss, Eliphalet J., Boston, Mass. Skiving-machine	May 29, 1877	1329	403	11	954
186,998	Foss, Henry A., New Britain, Conn. Bench-plane	Feb. 6, 1877	83	28	11	213
	Foss, James. (*See* Stewart, Frank L., assignor.)					
191,578	Foss, L. Bacon, assignor to Dover Stamping Company, Boston, Mass. Baking-pan	June 5, 1877	64	19	11	986
195,497	Foss, Moses, Cairo, Ill. Ladder	Sept. 25, 1877	775	227	12	533
190,965	Foster, Alexander W., jr., Pittsburg, Pa. Pipe-joint	May 22, 1877	896	265	11	887
	Foster, Amanda E., *et al.* (*See* Foster, George W. and C. W., assignors.) (Reissue)					
186,997	Foster, Andrew J. B., Mount Pleasant, Tenn. Harrow	Feb. 6, 1877	82	28	11	213
188,883	Foster, Archibald H., Muncie, Ind. Curtain-fixture	Mar. 22, 1877	913	287	11	531
	Foster, Avery B. (*See* Wesson, Walter D., assignor.)					
	Foster, Charles W. (*See* Foster, George W. and C. W.) (Reissue)					
185,857	Foster, David A., Richmond, Ind. Street-car	Jan. 2, 1877	42	13	11	14
190,842	Foster, Frank H., Chelsea, Mass. Chair	May 15, 1877	754	223	11	861

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
7,764	Foster, George W. and C. W., Boston, Mass., assignors, by mesne assignments, to M. A. and A. E. Foster. Glass-furnace (Reissue)	June 26, 1877	1094	331	11	1149
197,352	Foster, Hickman E., assignor of one-half interest to R. C. Crocker, Decatur, Ill. Corn-planter	Nov. 20, 1877	657	195	12	872
7,639	Foster, James S., Yankton, Dak. Machine for twisting hay for fuel (Reissue)	Apr. 24, 1877	1178	356	11	737
	Foster, J. Knox. (*See* Lawrence, Alvin, assignor.)					
191,417	Foster, John T., Olive Green, Ohio. Gate and door latch and roller	May 29, 1887	1328	403	11	954
190,303	Foster, Joseph S., assignor to self and D. M. Dunning, Auburn, N. Y. Ticket-punch	May 1, 1877	187	56	11	770
188,617	Foster, Josiah, Honesdale, Pa. Railway-rail	Mar. 20, 1877	655	203	11	485
198,370	Samo.....Railway-track	Dec. 18, 1877	688	210	12	1061
	Foster, Lemuel T., *et al.* (*See* Stouffer, Hiram C., assignor.)					
	Foster, Mary A., *et al.* (*See* Foster, George W. and C. W., assignors) (Reissue.)					
187,263	Foster, Morrison, Pittsburg, Pa. Sash-fastener	Feb. 13, 1877	345	110	11	261
195,357	Foster, Moses H., Portland, Me. Carpet-beater	Sept. 18, 1877	623	185	12	504
	Foster, Newman P. (*See* Drake, Merritt V., assignor.)					
186,242	Foster, Richard H., Gloversville, N. Y. Paper box	Jan. 16, 1877	328	131	11	81
195,116	Foster, S. Conant, New York, N. Y. Exercising-machine	Sept. 11, 1877	376	113	12	460
192,688	Foster, Thomas M., Union City, Pa. Ventilator	July 3, 1877	141	39	12	31
	Foster, Timothy S. (*See* Gray & Foster.)					
	Foster, William. (*See* Jamieson, Henry A., assignor.)					
192,160	Foster, William A., Fitchburg, Mass. Oil-box for locomotive-engine cylinders	June 19, 1877	667	204	11	1081
188,348	Foster, William H., Kelsey, Cal. Dam for storing and utilizing tide-power	Mar. 13, 1877	388	122	11	439
193,403	Foogeu, Honore G., Cape Girardeau, Mo. Rotary churn	July 24, 1877	889	272	12	157
197,842	Foulis, William, Glasgow, North Britain. Gas-governor	Dec. 4, 1877	136	41	12	965
188,349	Fountain, Vincent, jr., West New Brighton, N. Y. Fare-register	Mar. 13, 1877	389	122	11	439
	Fontz, Henry W. (*See* Zimmerman, John P., assignor.)					
194,037	Fowle, Joseph W., assignor of one-half interest to W. H. Ireland, Boston, Mass. Marine-engine governor	Aug. 14, 1877	257	76	12	276
	Fowle, William B. (*See* Hopkins, Jason R., assignor.)					
188,618	Fowler, Abel B., and I. H. Flagg, Kalamazoo, Mich. Draft-equalizer	Mar. 20, 1877	656	203	11	485
191,667	Fowler, Albert A., Plano, Tex. Sulky-plow	June 5, 1877	148	46	11	996
186,469	Fowler, Charles W., Youngstown, Ohio. Pessary	Jan. 23, 1877	680	208	11	125
	Fowler, Edwin P. (*See* Clements & Fowler.)					
186,720	Fowler, Heber P., Seymour, Conn. Manufacturing horseshoe-nails	Jan. 30, 1877	919	285	11	167
192,910	Fowler, Herbert E., New Haven, Conn. Blank for metal forks and spoons	July 10, 1877	375	111	12	71
190,021	Fowler, John W., D. F. Lewis, W. H. Smith, and L. Fischer, Brooklyn, N. Y.; said Smith and Fischer assignors to said Fowler and Lewis. Passenger-register	Apr. 24, 1877	1052	321	11	720
	Fowler, Judge S. (*See* Brown, William P., assignor.)					
	Fowler Nail Company. (*See* Weaver, Lloyd, assignor.)					
196,346	Fowler, Peter N., Smith's Mills, Ky. Ditching-machine	Oct. 23, 1877	703	202	12	684
7,463	Fowler, Samuel W., assignor to F. H. and O. D. Lovell, Brooklyn, N. Y. Lamp-chimney (Reissue)	Jan. 16, 1877	608	186	11	102
188,289	Fowler, Walter B., Lawrence, Mass. Globe-valve	Mar. 13, 1877	330	104	11	430
186,333	Fowler, William H., Auburn, N. Y. Fruit and paint can	Jan. 16, 1877	528	160	11	93
7,613	Fowler, William R., Baltimore, Md., assignor to S. W. Lambeth, Philadelphia, Pa., and W. R. Latourcade, Beverly, N. J. Fly-fan (Reissue)	Apr. 17, 1877	844	260	11	684
186,243	Same.....Fly-fan	Jan. 16, 1877	328	132	11	81
198,289	Fox, Abraham, Stittville, N. Y. Basket	Dec. 18, 1877	615	186	12	1050
191,419	Fox, Addison C., Baltimore, Md. Envelope	May 29, 1877	1330	404	11	954
191,420	Same.....Adhesive composition	May 29, 1877	1331		11	954
189,447	Fox, Albert L., and J. Vorwald, Columbus, Ind. Railway-gate	Apr. 10, 1877	439	138	11	623
186,820	Fox, Edward, Brooklyn, N. Y. Steam trap and boiler feeder	Jan. 30, 1877	1017	315	11	180
192,864	Fox, Ernst A. C., Frederick, Md. Magazine heating and cooking stove	July 10, 1877	333	98	12	65
192,911	Same.....Clearing attachment for stove-grates	July 10, 1877	375	111	12	71
7,675	Fox, Francis J., assignor to J. M. Robinson and W. Z. Blakslee, Saint Petersburg, Pa. Casing-spear (Reissue)	May 15, 1877	860	255	11	874
197,841	Fox, Francis J., assignor of one-half interest to Carson Brothers, Monroeville, Pa. Automatic casing-spear for oil-wells	Dec. 4, 1877	135	41	12	965
196,748	Fox, George H., Boston, Mass. Breech-loading fire-arm	Nov. 5, 1877	11	4	12	762
196,749	Fox, George H., and H. F. Wheeler, Boston, Mass. Double-barreled gun	Nov. 6, 1877	13	4	12	762
187,116	Fox, James A., assignor to self and Shaw, Vincent & Co., Newfane, N. Y. Wagon-jack	Feb. 6, 1877	191	62	11	228
189,352	Fox, John B., South Bend, Ind. Wrench	Apr. 10, 1877	348	112	11	6 2
189,932	Fox, Robert, Deerfield, Iowa. Corn-planter	Apr. 24, 1877	959	293	11	708
7,479	Fox, Samuel L., Philadelphia, Pa., assignor to H. H. Doubleday. Tube-packing. (Reissue.)	Jan. 30, 1877	1121	346	11	193
193,571	Fox, Thomas, Bay City, Mich., assignor of one-half interest to J. J. Fitzgerrell. Tumbler for permutation-locks	May 8, 1877	471	140	11	816
193,500	Fox, Thomas, assignor to self and J. J. Fitzgerrell, Bay City, Mich. Permutation-lock	July 24, 1877	980	297	12	170
198,595	Fox, Thomas, Bay City, Mich., assignor of one-half interest to J. J. Fitzgerrell. Combination padlock	Dec. 25, 1877	913	279	12	1103
198,596	Fox, Thomas, New Britain, Conn., assignor of one-half interest to J. J. Fitzgerrell. Permutation-padlock	Dec. 25, 1877	914	279	12	1103
189,351	Fox, William, Wheeling, W. Va., assignor of one-half interest to A. H. Baggs, Bridgeport, Ohio. Manufacture of glassware	Apr. 10, 1877	346	111	11	612
	Foxell & Jones *et al.* (*See* Spoor, Stephen, assignor) (Reissue.)					
197,463	Foy, Lavinia H., New Haven, Conn. Corset	Nov. 27, 1877	784	234	12	900
198,597	Same.....same	Dec. 25, 1877	915	279	12	1103
187,838	Frakes, Thomas A., New Holland, Ill. Tire-tightener	Feb. 27, 1877	942	293	11	356
198,290	Frame, Thomas, Burlington, Iowa. Car-ventilator	Dec. 18, 1877	616	186 / 187	12	1050
187,117	Frampton, William H., Topeka, Kans. Vise for carpenters' benches	Feb. 6, 1877	191	63	11	229
187,118	France, Gustus S., assignor to Washburn & Moen Manufacturing Company, Worcester, Mass. Bale-tie	Feb. 6, 1877	192	63	11	229
188,884	France, Gustus S., Central Bridge, N. Y., assignor to Washburn and Moen Manufacturing Company, Worcester, Mass. Bale-tie	Mar. 27, 1877	943	287	11	532
193,154	Francis, John, Waco, Tex. Door-check	July 17, 1877	616	187	12	112
196,213	Francis, George, Albany, Wis. Shoe	Oct. 16, 1877	554	160	12	655
187,119	Francis, Isaac H., Baltimore, Md. Buckle for hat-bands	Feb. 6, 1877	193	63	11	223
7,812	Francisco, Henry, deceased, M. E. Francisco, administratrix, and assignor, by mesne assignments to A. A. Abbott, Chicago, Ill. Sleigh-knee (Reissue)	July 24, 1877	1082	324	12	182
186,670	Francisco, Lucien, McHenry, Ill. Seed-dropper	Jan. 30, 1877	873	270	11	100
	Francisco, Mary E., administratrix. (*See* Francisco, Henry) (Reissue.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
193,861	Frank, Benjamin F., Colfax, Cal. Fire-escape	Aug. 7, 1877	58	19	12	243
194,999	Frank, Charles, Harrisburg, Pa. Horse-hitching device	Sept. 11, 1877	253	77	12	443
187,612	Frank, Emil, and J. Kissling, Rahway, N. J. Ice-cream freezer	Feb. 20, 1877	698	217	11	315
196,214	Franke, Gustav, Chicago, Ill. Apparatus for shaping pantaloons	Oct. 16, 1877	554	161	12	655
195,117	Frankel, Alexander, assignor to J. Lagowitz, Newark, N. J. Trunk-fastening	Sept. 11, 1877	376	113	12	460
196,794	Frankenau, Oscar, Nürnberg, Germany. Combined pocket-book and revolver	Nov. 6, 1877	56	17	12	768
196,601	Frankenthal, Adolphus, Boston, Mass. Sleeve-button	Oct. 9, 1877	324	91	12	614
194,423	Franklin, Dan, Tama City, Iowa. Apparatus for bending and hardening mold-boards	Aug. 21, 1877	663	199	12	336
187,812	Franklin, Edward R., and S. F. Feavel, Shiocton, Wis. Wagon-seat spring-bar fastening	Aug. 7, 1877	15	5	12	236
7,597	Franklin, Francis B., Appleton, Wis., assignor to Union Wire Mattress Company, Chicago, Ill. Spring bed-bottom (Reissue)	Apr. 10, 1877	537	167	11	636 637
186,821	Franklin, German B., Jackson, Minn. Earth-auger	Jan. 30, 1877	1018	316	11	180
194,345	Franklin, Lewis, Platteville, Iowa. Spectacles	Aug. 21, 1877	591	177	12	327
192,249	Franklin, Samuel J., Fairmount, Ga. Harrow	June 19, 1877	764	232	11	1094
	Franklin, Simeon F. (*See* Bowman, Franklin & Colby.)					
197,264	Franks, Francis D., Prairie Grove, Iowa. Grain-conveyer	Nov. 20, 1877	567	168	12	858
	Franz, P. (*See* Niehell, Charles A., assignor.)					
197,114	Franzmann, Jacob, assignor of one-half interest to H. Varwig, Cincinnati, Ohio. Bung-cutting machine	Nov. 13, 1877	403	118	12	826
190,483	Frasch, Herman, Philadelphia, Pa. Apparatus and process for the separation and treatment of oils	May 8, 1877	388	113	11	805
	Fraser, Edwin J. (*See* Boone & Fraser.)					
	Fraser, Henry. (*See* Henderson, Ewen C., assignor.)					
	Fraser, James, *et al.* (*See* Shedlock, Alfred, assignor.)					
	Frasi, Frederick. (*See* Hamilton & Frasi.)					
192,250	Frazer, James J. C., Philadelphia, Pa. Vehicle hub and box	June 19, 1877	765	233	11	1094
	Frazer, Perry. (*See* McLonghlin, Francis, assignor.)					
193,860	Frazier, Edward H., Baltimore, Md. Kitchen-boiler	Aug. 7, 1877	57	18	12	242
187,754	Frazier, Samuel E., Ironton, Wis. Churn	Feb. 27, 1877	854	266	11	344
192,498	Frazier, Thomas J., Lyons, Iowa. Machine for trimming lumber	June 26, 1877	1030	310	11	1140
198,371	Frécot, Alexandre A., Paris, France. Electro-magnetic fire-alarm and gas-intercepter	Dec. 18, 1877	689	182	12	1061
198,598	Frederick, Benjamin T., assignor to Northwestern Iron-Fence Company, Marshalltown, Iowa. Metal fence-post	Dec. 25, 1877	916	279	12	1104
188,885	Frederick, John C., Chicago, Ill., assignor to J. C. F. Von Rosenberg-Lipinsky, Burlington, Wis. Baby-walker	Mar. 27, 1877	944	288	11	532
185,909	Frederick, Levi W., Hall, Ind. Wagon-gearing	Jan. 2, 1877	95	29	11	21
191,041	Same.....Draft-equalizer	May 22, 1877	971	288	11	897
	Free, Henry, *et al.* (*See* Darling, Charles E., assignor.)					
191,332	Freeborn, William, San Francisco, Cal. Rotary plow	May 29, 1877	1257	379	11	944
	Freeman & Co. (*See* Freeman, Joseph J., assignor.)					
193,647	Freeman, Albert A., assignor to S. L. Garrett, Philadelphia, Pa. Anti-friction roller for sliding doors	July 31, 1877	1155	346	12	203
190,022	Freeman, Henry B., Charleston, Ill. Swinging-gate	Apr. 24, 1877	1056	321	11	720
192,251	Freeman, Hiram, Parker's Landing, assignor to Jarecki Manufacturing Company, Erie, Pa. Pump-rod adjuster	June 19, 1877	765	233	11	1094
189,619	Freeman, Joseph J., assignor to Freeman & Co., Attleborough, Mass. Link for ornamental chains	Apr. 17, 1877	625	193	11	656
190,023	Freeman, Moodie R., Detroit, Mich. Enameling photographs	Apr. 24, 1877	1057	321	11	720
7,775	Freemnn, Moody G., Bloomington, Ill. Iron fence (Reissue)	July 3, 1877	265	77	12	48
196,002	Freeman, Virginius, Norfolk, Va. Sash-holder	Oct. 9, 1877	325	92	12	615
197,115	Frees, Ira, Venice, Ohio, Lock for barn doors	Nov. 13, 1877	405	119	12	826
	Freese, Frederich A. (*See* Hartman & Freese.)					
	French & Co., A. (*See* French, Aaron, assignor) (Reisene.)					
186,999	French, Aaron, assignor to A. French & Co., Pittsburg, Pa. Manufacture of elliptic springs	Feb. 6, 1877	83	28	11	213
7,600	Same.....Manufacture of elliptic springs (Reissue)	May 8, 1877	570	169	11	829
193,080	Same.....Elliptic spring	July 17, 1877	541	164	12	102
198,454	French, Alonzo C., Cincinnati, Ohio. Portable folding shelf	Dec. 25, 1877	784	238	12	1034
195,890	French, Bridget, assignor to C. T. Ham, J. B. Carson, and R. Hart, Rochester, N. Y. Lubricating compound	Oct. 9, 1877	207		12	599
7,532	French, Erastus S., Templeton, Mass., assignor to Thompson, Perley & Waite. Nursery-chair (Reissue)	Feb. 27, 1877	1056	326	11	371
188,120	French, Erastus S., and L. Hunting, Baldwinsville, assignor to W. P. Clark & Co., Winchendon, Mass. Convertible chair	Mar. 6, 1877	150	45 46	11	400
188,508	French, Ervin D., assignor to self and J. L. Harris, Byhalia, Miss. Plow	Mar. 20, 1877	560	172	11	470
	French, George. (*See* Mackie, Faure & French.)					
191,042	French, George F., Portland, Me. Respiratory-brace	May 22, 1877	972	283	11	897
198,599	French, James C., Del Norte, Colo. Tent	Dec. 25, 1877	917	280	12	1104
194,593	French, John, assignor to self and J. W. Hill, South Saint Louis, Mo. Machine for welding tubes	Aug. 28, 1877	837	249	12	369
	French, Oratus S. (*See* Brayton, June & French.)					
	French, Theodore L., *et al.* (*See* Philleo & Cox, assignors.)					
	French, Walter L. (*See* Reynolds, Davis B., assignor.)					
	French, William C. (*See* Atwood, L., assignor.)					
194,864	French, William I., assignor to self and P. Jacobs, Cainsville, Mo. Railway-gate	Sept. 4, 1877	108	34	12	415
	French, William W. (*See* Coddington & French.)					
7,618	Frentress, Henry N. (*See* Coddington & French) (Reissue)	May 22, 1877	1150	344	11	921
192,981	Frere, Edouard, Antwerp, Belgium. Railway	July 10, 1877	439	132	12	81
189,307	Frese, Bernard, Chicago, Ill. Roller-abstractor for watches	Apr. 10, 1877	306	96	11	606
195,756	Frese, John F., Baltimore, Md. Staud for smoothing fabrics	Oct. 2, 1877	65	19	12	570
198,491	Freshman, Andrew P., Marissa, Ill. Nursery-chair	Dec. 25, 1877	822	249	12	1089
185,911	Freund, Frank W., Cheyenne City, Wyo. Breech-loading fire-arm	Jan. 2, 1877	98	30	11	21
189,721	Freund, Frank W., Cheyenne, Wyo. Front sight for fire-arms	Apr. 17, 1877	723	223	11	669
7,751	Frey, John A., assignor, by mesne assignments, to C. Riessner & Co., New York, N. Y. Coal-oil stove (Reissue)	June 19, 1877	850	257	11	1104
7,674	Frey, John A., New York, N. Y., assignor, by mesne assignments, to C. Riessner & Co. Coal-oil stove (Reissue)	May 8, 1877	587	173	11	830
185,908	Frey, John A., New York, N. Y. Coal-oil stove	Jan. 2, 1877	93	28, 29	11	20
196,003	Frey, John W., Baltimore, Md. Fence-post	Oct. 9, 1877	326	92	12	615
	Frick, Charles H. (*See* Frick, William, assignor) (Reissue.)					
190,024	Frick, David A., Ottawa, Ohio. Butter-worker	Apr. 24, 1877	1057	322	11	720

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
7,934	Frick, William, Chester, Pa., assignor to C. H. Frick. Coupling and steering apparatus (Reissue)..	Nov. 6, 1877	235	70	12	793
186,419	Fricke, John B., Pine Island, Minn. Draftsman's compass	Jan. 23, 1877	631	192	11	118 119
193,862	Fricker, Jacob, jr., and A. Seinecke, Cincinnati, Ohio. Ballot-box	Aug. 7, 1877	59	19	12	243
189,029	Frickinger, Frederick, West Nassau, N. Y. Upright piano-forte action.....	Apr. 3, 1877	19	6	11	561
	Friederberger, Henry, *et al.* (*See* Blackburn & Moeslein, assignors.)					
186,671	Friend, Samuel, Decatur, Ill. Animal-trap	Jan. 30, 1877	874	270	11	160
187,839	Fries, Lorenz P., Saint Louis, Mo. Cast metal lamp	Feb. 27, 1877	943	293	11	356
198,097	Fries, Michael, Sac City, Iowa Cockeye	Dec. 11, 1877	390	122	12	1011
	Frink, James. (*See* Frink, Melvin and J.)					
197,843	Frink, Melvin and J., Farmington, Me. Weather-strip	Dec. 4, 1877	137	41	12	965
	Frisbie, Dennis. (*See* Bean, Albert, assignor.)					
198,098	Frisbie, Hamlin F., Danville, Ill. Puppet-valve	Dec. 11, 1877	391	122	12	1012
198,099	Same.....Steam-engine cylinder	Dec. 11, 1877	391	123	12	1012
186,418	Fritz, Alexander, New York, N. Y. Toy	Jan. 23, 1877	631	192	11	118
185,910	Fritz, Gottlob, assignor of one-half interest to M. Butz, Cincinnati, Ohio. Noodle-machine	Jan. 2, 1877	96	30	11	21
189,553	Frizelle, James H., Boston, Mass. Spring bed-bottom	Apr. 17, 1877	557	173	11	648
191,525	Frizzell, William L., Davenport, Iowa. Harness-saddle tree	June 5, 1877	16	5	11	978
	Froman, John A. (*See* Froman, William H. and J. A.)					
196,888	Froman, William H. and J. A., Elizabethtown, Ky. Vehicle-shaft holder.....	Nov. 6, 1877	159	47	12	782
186,334	Frost, Charles W., Philadelphia, Pa. Toy card-shooter.....	Jan. 16, 1877	529	160	11	93
186,553	Frost, Edward J., Philadelphia, Pa. Electric thermostat.....	Jan. 23, 1877	757	232	11	135
193,327	Same.....Machine for cutting paper envelopes, &c	July 24, 1877	817	250 251	12	147
196,347	Frost, Eli C., Watkins, N. Y. Range	Oct. 23, 1877	704	203	12	684
192,752	Frost, Ezra W., Brooklyn, N. Y. Pencil-sharpener.....	July 3, 1877	192	55	12	39
	Frost, Francis S. (*See* Fisher, Timothy L., assignor.)					
191,579	Frost, Francis S., Arlington, Mass. Easel.....	June 5, 1877	64	19	11	986
192,912	Frost, Henry S., Watertown, Conn. Umbrella-tip cup.....	July 10, 1877	376	111	12	71
192,427	Frost, Zarda, assignor to self and W. H. White, Kinmundy, Ill. Mower and reaper knife sharpener.....	June 26, 1877	963	289	11	1132
196,651	Frue, William B., and W. McDermott, Detroit, Mich. Ore-washer.....	Oct. 30, 1877	1022	297	12	740
7,931	Fruhling, William, San Jose, Cal. Gang-plow (Reissue)..	Oct. 30, 1877	1105	322	12	752
186,335	Same.....same.....	Jan. 16, 1877	530	160	11	93
187,264	Fry, Henry R., Marion, Ind. School-desk.....	Feb. 13, 1877	346	110	11	261
188,350	Frye, William H. H., Marshalltown, Iowa. Wire fence.....	Mar. 13, 1877	390	122	11	439
186,672	Fryer, Thomas T., Buffalo, N. Y. Automatic extinguisher for gas-burners.....	Jan. 30, 1877	874	270 271	11	160
189,210	Fuchs, Henry, assignor to G. W., A. C., and A. M. Barnhart and C. Spindler, Chicago, Ill. Clutching device.....	Apr. 3, 1877	175	60	11	582
196,652	Fulghum, Jesse P., Milton, assignor of one-half interest to Wayne Agricultural Company, Richmond, Ind. Grain-drill	Oct. 30, 1877	1023	297	12	740
195,757	Fulkerson, Franklin, Frankfort, Ind. Fence.....	Oct. 2, 1877	65	20	12	570
	Fullagar, E., administratrix. (*See* Fullagar, William) (Reissue.)					
7,457	Fullagar, William, deceased, J. McGlensey, and E. Fullagar, administrators and assignors, by mesne assignments, to B. B. Schneider, New York, N. Y. Shade for gas-lights..... (Reissue)..	Jan. 2, 1877	190	58	11	34
7,619	Fuller, Albert, Brooklyn, N. Y. Faucet..... (Reissue)..	Apr. 17, 1877	851	262	11	685
7,801	Fuller, Albert, Brooklyn, assignor to H. C. Meyer & Co., New York, N. Y., and L. Wolff, Chicago, Ill. Tank-regulator..... (Reissue)..	July 17, 1877	797	244	12	136
194,346	Fuller, Charles, Little Marsh, Pa. Machine for picking stones, &c.....	Aug. 21, 1877	592	177	12	327
192,366	Fuller, Charles A., Minneapolis, Minn. Chest-protecting garment	June 26, 1877	907	272	11	1124
7,618	Fuller, Clark S., La Fayette, Ind., assignor to C. R. Knickerbocker, Jackson, Mich. Apparatus for drying ground wheat (Reissue)..	Apr. 17, 1877	850	261	11	685
	Fuller, Harvey C. (*See* Libby, Thomas, assignor.)					
187,613	Fuller, Harvey R., Princeton, Mo. Millstone dressing-machine	Feb. 20, 1877	699	217	11	315
186,673	Fuller, Henry, and T. L. Boyd, Franklin, Ohio. Sulky-plow.....	Jan. 30, 1877	876	271	11	160 161
198,100	Same.....same.....	Dec. 11, 1877	392	123	12	1012
194,594	Fuller, Henry W., Seneca, Kans. Calf-muzzle	Aug. 28, 1877	838	249	12	369
	Fuller, Hiram. (*See* Andrews & Fuller.)					
188,509	Fuller, Hiram E., Lansingburg, N. Y. Refrigerator.....	Mar. 20, 1877	560	173	11	471
	Fuller, Isaac M. (*See* Cosgrove, William N., assignor.)					
	Fuller, J. Cutler, *et al.* (*See* Holmes, Daniel M., assignor.)					
	Fuller, Leonard A. (*See* Fuller, Oscar B. and L. A.)					
189,554	Fuller, Levi K., assignor to J. Estey & Co., Brattleborough, Vt. Reed-organ action...	Apr. 17, 1877	558	174	11	648
189,555	Same.....Reed-organ	Apr. 17, 1877	560	174	11	648
190,843	Fuller, Levi K., Brattleborough, Vt. Organ-case	May 15, 1877	755	224	11	861
197,116	Fuller, Obed L., Marseilles, Ill. Spring bed-bottom.....	Nov. 13, 1877	405	119	12	826
189,620	Fuller, Orlando F., Lamont, Mich. Farm-gate	Apr. 17, 1877	626	193	11	656
194,140	Fuller, Oscar B. and L. A., Mount Pulaski, Ill. Windmill.....	Aug. 14, 1877	378	112	12	291
	Fuller, Thomas R., *et al.* (*See* Brandon, Charles T., assignor.)					
	Fuller, Walter. (*See* Reed, Thomas S., assignor.)					
190,205	Fuller, William F., New York, N. Y. Steam-radiator.....	May 1, 1877	91	27	11	758
190,484	Fuller, William W., Elmira, Ill. Combined stalk-cutter and hay-rake.....	May 8, 1877	389	113	11	805
190,485	Fullerton, George A., assignor to G. H. P. Flagg, Boston, Mass. Edge-burnishing machine for boots and shoes	May 8, 1877	390	114	11	805
	Fullerton, William. (*See* Brooks, Franklin W., assignor.)					
186,554	Fulmer, J. and H., Dubuque, Iowa. Windlass hoisting-machine.....	Jan. 23, 1877	757	232	11	135
190,572	Fulton, Abraham, Olney, Ill. Middlings-separator.....	May 8, 1877	472	140	11	816
197,027	Fulton, Louis B., assignor to J. Biggerstaff, Pittsburg, Pa. Oil-well pump.....	Nov. 13, 1877	309	92	12	812
189,854	Fulton, Samuel M., Pittsburg, Pa. Draw-coupling for boats, &c	Apr. 24, 1877	882	269	11	698
198,600	Funck, Joseph, Tompkinsville, N. Y. Lamp	Dec. 25, 1877	918	280	12	1104
186,822	Funk, Aaron B., and S. Miller, Urbana, Ohio. Windmill	Jan. 30, 1877	1019	316	11	180
195,498	Funk, Daniel M., Harrisburg, Oreg. Gang-plow	Sept. 25, 1877	776	228	12	533
	Funk, Henry M. (*See* King & Funk.)					
196,081	Funk, Frederick, Detroit, Mich. Tanning compound	Oct. 16, 1877	415		12	635
	Funkhouser, Joseph. (*See* Huffman & Funkhouser.)					
194,141	Furbish, Henry H., Yarmouth, Me. Recovering alkalies used for the reduction of wood to paper-pulp	Aug. 14, 1877	379		12	291
	Furbush, Everett W. (*See* Post & Furbush.)					

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
192,221	Furlong, Thomas T., assignor of one-half interest to E. B. Draper, Chicago, Ill. Sponge-holder for horses feet	July 10, 1877	292	85	12	60
	Furman, Alonzo B. (*See* McNutt & Furman) (Reissue.)					
191,043	Furman, George M., Laclede, Mo. Sulky-harrow	May 22, 1877	973	289	11	897
191,044	Furnas, Jeremiah F. and W. W., Dysart, Iowa. Pump	May 22, 1877	974	289	11	897
194,865	Furnas, Seth, Bridgeport, Ind. Ditching-plow	Sept. 4, 1877	108	34	12	415
	Furnas, William W. (*See* Furnas, Jeremiah F. and W. W.)					
190,844	Furness, Anthony E., Ogdensburg, N. Y. Quilting-frame and clothes-bar	May 15, 1877	756	224	11	861
	Furness, Nathaniel H. (*See* Wales, Sigourney, assignor.)					
	Furney, Elliott E. (*See* Suter & Furney.)					
197,028	Furniss, Albert, Meriden, Conn. Mustache-guard	Nov. 13, 1877	310	920	12	813
	Furst, Joseph B., *et al.* (*See* Devling, James W., assignor.)					
	Gabriel, John. (*See* Eichenlaub & Gabriel.)					
	Gadsden Grange Mill Company. (*See* Wescott & Randall, assignors.)					
189,448	Gaff, Thomas, Aurora, Ind. Still	Apr. 10, 1877	440	138	11	623
	Gage, Alfred. (*See* Shedlock, Alfred, assignor.)					
186,244	Gage, Eli C., Witoka, Minn. Combined corn planter and cultivator	Jan. 16, 1877	429	132	11	81
	Gage, James L. (*See* Tomlinson, James, assignor.)					
187,707	Gaillard, Charles, jr., Erie, Pa. Lifting jack	Feb. 27, 1877	810	251	11	338
190,675	Gaines, George B., assignor of one-half interest to J. E. Sanders, Indianapolis, Ind. Hominy-mill	May 15, 1877	600	178	11	840
196,574	Gaines, William W., Au Sable Forks, N. Y. Rock-drill	Oct. 30, 1877	946	274	12	729
191,131	Gainey, James, Augusta, Ga. Filtering apparatus	May 22, 1877	1055	316	11	908
192,822	Galbraith, Robert S., assignor of one-half interest to W. Snow, Montreal, Canada. Umbrella	July 10, 1877	293	85	12	60
193,941	Gale, Ansel H., Freeport, Ill. Sulky-plow	Aug. 7, 1877	142	43	12	254
192,118	Gale, Daniel J., Bristol, Conn. Calendar-clock	June 19, 1877	622	190	11	1076
192,117	Gale, Herbert N., Bristol, Conn. Bottle-stopper	June 19, 1877	620	189	11	1075
189,722	Gale, Horatio, Albion, Mich. Plow	Apr. 17, 1877	724	223	11	669
190,304	Gale, Moses F., Brooklyn, N. Y. Valve for water-closets	May 1, 1877	189	56	11	770
187,001	Gale, William G., Cincinnati, Ohio. Spark-conveyer	Feb. 6, 1877	85	29	11	213
186,823	Galer, Richerd L., Dunham and E. E. Spencer, parish of Saint Armand, East Quebec, Canada. Combined fertilizer and seed sower	Jan. 30, 1877	1020	316	11	180
188,009	Galindo, Edwin A., Brooklyn, N. Y. Mat for pictures and show-cards	Mar. 6, 1877	53	15	11	387
193,501	Gallagher, John H., New York, N. Y. Box for making mattresses	July 24, 1877	982	297	12	170
	Gallagher, Joseph. (*See* Cline & Gallagher.)					
196,348	Gallaher, Levi, Businessburg, Ohio. Elevator for water, grain, or earth	Oct. 23, 1877	705	203	12	684
196,004	Galley, William, Toledo, Iowa. Corn-planter	Oct. 9, 1877	327	92	12	615
194,595	Gallup, Glen, assignor of one-half right to H. Woodford, Cleveland, Ohio. Wash-board.	Aug. 28, 1877	839	250	12	370
188,790	Galusha, William M., assignor to self and D. Phillips, East Arlington, Vt. Carpet-stretcher	Mar. 27, 1877	850	258	11	518
188,886	Galvin, John, Detroit, Mich. Hose-coupling	Mar. 27, 1877	945	288	11	532
192,328	Gamble, James W., assignor of one-half interest to G. W. Rife and J. White, Aylmer, Canada. Seed and plaster sower	June 26, 1877	869	262	11	1119
190,845	Gamble, Thomas, and J. Wagner, Martinsville, Ill. Water-elevator	May 15, 1877	756	224	11	861
196,653	Gamgee, John, Chelsea, Great Britain. Producing evenly-congealed ice-surfaces	Oct. 30, 1877	1023	297	12	749
196,654	Same. Refrigerating medium	Oct. 30, 1877	1024		12	749
	Gammon, Elijah H., *et al.* (*See* Coddington & Kennedy, assignors.)					
	Same. (*See* Steward, John F., assignor.)					
192,575	Gammon, Elijah H., Chicago, and R. H. Dixon and J. F. Steward, Plano, assignors to E. H. Gammon and W. Deering, Chicago, Ill. Grain-binder	July 3, 1877	18	6	12	15
190,676	Gaudolfo, Joseph, Brooklyn, N. Y. Bone-black revivifier	May 15, 1877	602	178	11	840
193,863	Gandy, Alonzo, and H. W. Wilson, Freeport, Ohio. Thill-coupling	Aug. 7, 1877	62	19	12	243
188,351	Gano, Louis H., New York, N. Y. Parlor-skate	Mar. 13, 1877	391	122	11	439
187,371	Gans, William, Olathe, Kans. Corn-stalk cutter	Feb. 13, 1877	453	143	11	275
197,771	Ganster, George P., Reading, Pa. Combined clock and gas regulating mechanism	Dec. 4, 1877	66	21, 22	12	955
197,772	Same. Raising and lowering gas	Dec. 4, 1877	69	22	12	955
	Gant, Valentine. (*See* Fallin, Henry C., assignor.)					
187,002	Ganter, Jacob, New York, N. Y. Sewer-trap	Feb. 6, 1877	86	29	11	212
193,155	Garcia, Rufino C., assignor to self and A. Robin, San Antonio, Tex. Sand-conveyer	July 17, 1877	617	187	12	112
195,923	Gard, Walter E., Croton Landing, N. Y. Brick-machine	Oct. 9, 1877	240	68, 69	12	603
192,161	Gardam, Joseph, Brooklyn, N. Y. Parallel ruler	June 19, 1877	667	204	11	1034
198,372	Gardiner, Charles O., assignor to P. P. Mast & Co., Springfield, Ohio. Cultivator and seeding-machine	Dec. 18, 1877	690	210	12	1061
188,619	Gardiner, Heman, New York, N. Y. Car-axle lubricator	Mar. 20, 1877	656	203	11	485
191,133	Gardiner, Rodolphus, Olneyville, R. I. Gage for bits	May 22, 1877	1057	316	11	908
	Gardner, A. V. (*See* Le Duc, William G., assignor.)					
	Gardner, C. O., *et al.* (*See* Kelly, John R., assignor.)					
193,240	Gardner, Cornelius Y., Vineland, N. J. Heel-stiffener for boots and shoes	July 17, 1877	709	217	12	124
198,101	Gardner, Emmet V. R., Johnson's, N. Y. Horse hay-fork	Dec. 11, 1877	393	123	12	1012
196,005	Gardner, George, New York, N. Y. Pressed wooden dish	Oct. 9, 1877	328	92	12	615
186,470	Gardner, Henry L., Springfield, Mass. Revolving fire-arm	Jan. 23, 1877	681	209	11	125
186,571	Gardner, Jofferson M., assignor to self and A. McClain, Silver Springs, Tenn. Cultivator and cotton-chopper	Jan. 23, 1877	771	238	11	137
190,135	Gardner, Robert A., Providence, R. I. Tea and coffee pot	May 1, 1877	21	6	11	748
193,156	Gardner, William, New York, N. Y. Billiard-table	July 17, 1877	617	187, 188	12	112
194,770	Garfield, Charles L., Albany, N. Y. Ventilator for buildings	Sept. 4, 1877	13	4	12	402
	Garner, William B. (*See* Goodrich & Chapman, assignors.)					
	Garrabrant, Jacob. (*See* Gilbert & Garrabrant.)					
192,062	Garratt, William T., San Francisco, Cal. Hydraut	June 19, 1877	569	172	11	1060
192,329	Garrecht, William H., Lancaster, Pa. Safety-valve attachment to utilize waste steam	June 26, 1877	870	263	11	1119
	Garred, David W., *et al.* (*See* Beckley, Washington, assignor.)					
	Garred, Milard F., *et al.* (*See* Beckley, Washington, assignor.)					
	Garretson, Oliver S. (*See* Strong & Garretson.)					
188,510	Garrett, James, Le Roy, assignor of one-half interest to R. C. Smith, Thompson, Ohio. Harrow	Mar. 20, 1877	562	173	11	471
191,847	Garrett, James, Pembroke, N. Y. Fence	June 12, 1877	331	103	11	1025
187,120	Garret, Joseph, Chester, Pa. Yarn-guide and cleaner for spooling-machines	Feb. 6, 1877	194	63	11	229
188,121	Same. Traverse motion for guide-wires of spinning-machines	Mar. 6, 1877	151	46	11	401
	Garrett, Samuel L. (*See* Freeman, Albert A., assignor.)					
	Same. (*See* Oakford, Isaac R., assignor.)					
	Same. (*See* Phelps, Ira M., assignor.)					

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	Garrett, Samuel L. (*See* Waitt, George L., assignor.)					
185,825	Garrison, Charles O., New York, N. Y. Method and apparatus for cooling and spreading glue	Jan. 2, 1877	11	4	11	10
191,132	Same.....Manufacturing glue	May 22, 1877	1056		11	903
186,336	Garrison, William F., Williamsburg, N. Y. Air-compressor	Jan. 16, 1877	530	161	11	93
193,502	Garstang, Richard, Saint Louis, Mo. Boiler-feeder	July 24, 1877	983	298	12	170
186,824	Gartenmann, Anton, New York, N. Y. Loom	Jan. 30, 1877	1022	316, 317	11	180
189,449	Gartland, Francis X., Philadelphia, Pa. Coffin-handle	Apr. 10, 1877	441	139	11	624
192,689	Gartner, Adolph, assignor to self and Louis Gompper, New York, N. Y. Toy boot-black	July 3, 1877	142	39	12	32
196,443	Garvin, John W., and C. C. Bowen, Philadelphia, Pa. Strainer and alarm for coffee and tea pots	Oct. 23, 1877	791	228	12	697
	Garwood, Jonathan. (*See* Benton, George W., assignor.)					
187,841	Gary, Joseph E., Chicago, Ill. Steam and vacuum pump	Feb. 27, 1877	944	293, 294	11	356
190,206	Gary, Wesley W., Huntingdon, Pa. Electric magnetic motor	May 1, 1877	92	27	11	758
	Gascoigne, George. (*See* Collins & Gascoigne.)					
187,813	Gash, Oliver P., Missouri City, Mo. Artists' pencil	Aug. 7, 1877	15	5	12	236
190,846	Gasper, Simon, Indianapolis, Ind. Refrigerator	May 15, 1877	757	225	11	861
193,328	Gass, George F., Allegheny, Pa. Rock-drill-hole cleaner	July 24, 1877	819	251	12	147
	Gass, Julius, *et al.* (*See* Theegarten, Gottfried D., assignor.)					
	Gatchell, Frederick H., *et al.* (*See* Clark, George, assignor.)					
	Gatchell, Nathan B., *et al.* (*See* Clark, George, assignor.)					
186,123	Gately, Dennis C., Newton, Conn. Water-proof hose	Jan. 9, 1877	308	94	11	58
192,252	Gates, George W., Worcester, Mass. Folding-table	June 19, 1877	766	233	11	1094
198,291	Gates, Homer T., Hartford, Ohio. Combined wrench and vise	Dec. 18, 1877	617	187	12	1050
	Gates, I. W., *et al.* (*See* Woodward, John A., assignor.)					
7,661	Gates, John, Portland, Oreg. Lubricator.....(Reissue)	May 8, 1877	571	169	11	829
7,662	Same.....same.....(Reissue)	May 8, 1877	572	170	11	829
7,663	Same.....same.....(Reissue)	May 8, 1877	572	170	11	829
192,063	Same.....Spark-arrester	June 19, 1877	570	173	11	1069
192,367	Same.....Steam-pump valve-gear	June 26, 1877	907	272	11	1121
193,329	Same.....Steam-boiler	July 24, 1877	820	257	12	147
196,082	Gates, Philetus W., Chicago, Ill. Ore-crusher	Oct. 16, 1877	415	120, 121	12	636
187,121	Gates, William, Hopkins Station, Mich. Land-roller	Feb. 6, 1877	195	64	11	221
195,211	Gathmann, Louis, Chicago, Ill. Grain-separator	Sept. 18, 1877	485	143	12	484
187,372	Gathright, Josiah B., Louisville, Ky. Label-holder	Feb. 13, 1877	454	143	11	276
186,721	Gause, Charles O., Hespar, Kans. Tire-heating device	Jan. 30, 1877	920	285	11	167
187,122	Gauthier, Charles W., Sandwich, Canada. Pan for freezing fish	Feb. 6, 1877	195	64	11	220
192,576	Gawley, Hector, Essex County, Ontario, Canada. Set-gear for saw-mills	July 3, 1877	22	7	12	15
194,668	Gawthrop William W., Kennett Square, Pa. Lumber-wagon	Aug. 28, 1877	902	269	12	379
187,265	Gay, Arthur E., Nashua, N. H. Pipe-tongs	Feb. 13, 1877	347	110	11	261
193,081	Gay, George, Philadelphia, Pa. Step-ladder	July 17, 1877	542	164	12	102
	Gayde, William S. (*See* Rowland & Gayde.)					
190,847	Gaylord, Homer, Oskaloosa, Iowa. Blind-slat adjuster	May 15, 1877	758	225	11	861
196,006	Gayton, William, Chicago, Ill. Window-cleaner	Oct. 9, 1877	328	93	12	615
	Gazzam, Isabella M., *et al.* (*See* Powers, Titus, assignor.)					
	Gazzam, Isabella M. (*See* Powers & Hulbert, assignor.)					
190,848	Gearhart, Joseph E., West Decatur, Pa. Car-pusher	May 15, 1877	759	225	11	861
198,373	Gebauer, Otto, Pragne, Austria. Device for transmitting steam from boilers	Dec. 18, 1877	692	211	12	1061
193,503	Gebhardt, Henry, Silver City, Mont. Quartz-crushing machine	July 24, 1877	984	298	12	170
198,102	Gecmen, Joseph, Buffalo, N. Y. Mash tun	Dec. 11, 1877	393	124	12	1012
187,614	Gee, William, New York, N. Y. Carbonic-acid-gas-generator	Feb. 20, 1877	699	217	11	315
195,598	Geer, Costello B., Union City, Pa. Letter-box, bell, and door-plate combined	Sept. 25, 1877	868	258	12	547
193,157	Geer, George, Unionville, Conn. Spring-hinge	July 17, 1877	619	188	12	113
	Geer, William E. (*See* Winter, Charles M., assignor.)					
186,825	Geur, Levi F., Baltimore, Md. Hat-rack	Jan. 30, 1877	1024	317	11	181
189,933	Geise, Henry, Philadelphia, Pa. Oscillating-chair	Apr. 24, 1877	960	293	11	708
190,849	Gelston, Maltby, East Haddam, Conn. Cigar	May 15, 1877	759	225	11	862
	Gemmell, Thomas. (*See* Regan, Simon, assignor.)					
195,812	Gemmell, Thomas, Baltimore, Md. Stove	Oct. 2, 1877	117	34	12	578
196,007	Same.....Heating-stove	Oct. 9, 1877	329	93	12	615
194,299	Genth, Frederick A., and G. F. Barker, assignors of one-half interest to T. R. Brown and H. Bower, Philadelphia, Pa. Preventing the fouling of gas-lime	Aug. 21, 1877	540		12	320
	Gentzsch, A. (*See* Axt, August, assignor.)					
188,352	Genzly, Jacob, Victor, Iowa. Sod-cutter	Mar. 13, 1877	391	123	11	429
192,753	Same.....Wagon-end-gate rod	July 3, 1877	193	55	12	39
187,842	George, David L., Winona, Minn. Wash-board	Feb. 27, 1877	946	294	11	356
	George, John S. (*See* Payne & George.)					
192,064	George, Samuel, Lowell, Mass. Spinning-mule	June 19, 1877	572	173	11	1069
187,266	George, William, Modesto, Cal. Sheep-shears	Feb. 13, 1877	347	110	11	261, 262
	Gephart, Benjamin, *et al.* (*See* Pepper & Gephart.)					
189,211	Gerald, Amos F., assignor of one-half interest to W. Harvey, Augusta, Me. Hinge for boxes, &c	Apr. 3, 1877	178	61	11	582
196,215	Same.....Paper-placer	Oct. 16, 1877	535	161	12	635
193,864	Gerald, Amos F., Augusta, assignor of one-half interest to J. P. Norton, Lewiston, Me. Whip	Aug. 7, 1877	62	20	12	243
195,118	Gerard, Charles A., Kansas City, Mo. Lock and key	Sept. 11, 1877	377	114	12	461
189,450	Gerard, Edward J., Trenton, N. J. Ornamenting crockery-ware	Apr. 10, 1877	442		11	624
190,573	Gerard, John, and A. Turnbull, New Britain, Conn. Fire-escape (hydraulic)	May 8, 1877	473	140, 141	11	816
195,000	Gérard, John, assignor to Trenton Lock and Hardware Company, Trenton, N. J. Padlock	Sept. 11, 1877	253	77	12	443
197,624	Gerard, Joseph, Woodhaven, assignor to Lalance & Grosjean Manufacturing Company, New York, N. Y. Sheet-metal vessel	Nov. 27, 1877	953	283	12	924
	Gerardin, Benjamin M. (*See* Whiteman & Gerardin.)					
	Gerber, Abraham V. (*See* Park, Levi, assignor.)					
191,424	Gerber, Emanuel, Lafayette, Ga. Seed-planter	Aug. 21, 1877	666	199	12	337
197,353	Gerdom, Anthony H., Albany, N. Y. Vegetable-cutter	Nov. 20, 1787	658	195	12	873
	Gerhard, H. (*See* Siegfried, Alexander H., assignor.)					
190,574	Gerlach, Peter, Cleveland, Ohio. Crosscut-saw handle	May 8, 1877	474	141	11	816

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
192,428	Gerrish, David T., Lewiston, Me. Sash-fastener	June 26, 1877	963	289	11	1132
192,429	Getchell, Seth S., Woonsocket, R. I. Card-screw	June 26, 1877	964	289	11	1132
193,042	Getter, Marcus E., Alden, Minn. Machine for bunching hay	Aug. 7, 1877	143	43	12	254
193,504	Gettman, Emil, Baltimore, Md. Apparatus for emptying sewage-tanks	July 24, 1877	985	298	12	170
	Gibbons, W. G., *et al.* (*See* Savery, Thomas H., assignor.)					
	Gibbs, Eugene S. (*See* Rowe, William F., assignor.)					
	Gibbs, George, *et al.* (*See* Farquharson, John, assignor.)					
	Gibbs, Jacob S. (*See* Gibbs, William, assignor.)					
196,116	Gibbs, James E. A., Steel's Tavern, Va. Sewing-machine	Oct. 16, 1877	457	133, 134	12	641
186,337	Gibbs, Jason, Clyde, Ohio. Door and gate fastener	Jan. 16, 1877	532	161	11	93
	Gibbs, Lewis. (*See* Gibbs, William, assignor.)					
189,308	Gibbs, William, assignor to L. Gibbs, Canton, Ohio. Breast-collar for harness	Apr. 10, 1877	307	97	11	607
190,305	Gibford, Frank, and L. C. McCormick, Newton, Iowa. Car-coupling	May 1, 1877	190	56	11	771
197,625	Gibford, Frank, Newton, Iowa, assignor of one-fourth interest to U. Gibford, New York, N. Y. Car-coupling	Nov. 27, 1877	954	283	12	924
	Gibford, Uriah. (*See* Gibford, Frank, assignor.)					
	Gibson, Douglas, *et al.* (*See* Pond, Chester H., assignor.)					
190,207	Gibson, George W., Selbyville, Ky. Animal-trap	May 1, 1877	94	27	11	758
	Gibson, Robert. (*See* Booth, George, assignor.)					
189,451	Gibson, Robert, New York, N. Y. Roller-skate	Apr. 10, 1877	443	139	11	624
191,134	Gibson, Samuel, and D. C. Eberhart, Shrewsbury, Pa., assignor to said Eberhart, Shrewsbury, Pa. Oscillating steam-engine	May 22, 1877	1058	316	11	908
193,444	Gibson, Sidney, assignor of one-half interest to C. Bowden and W. Knighton, Sharon, Pa. Carriage running gear	July 24, 1877	927	282	12	162
197,354	Gibson, William M., Phenix, R. I. Lift-pump	Nov. 20, 1877	659	196	12	872
188,791	Gibson, William S., Cropper's Depot, Ky. Straw-cutter	Mar. 27, 1877	851	258	11	519
194,669	Gidley, Robert, Poughkeepsie, N. Y. Eccentric power	Aug. 28, 1877	903	269	12	379
187,123	Gielon, John, Chicago, Ill. Nozzle for hose	Feb. 6, 1877	196	64	11	229
	Gielow, John. (*See* Clifford & Gielow.)					
193,648	Giffard, Paul, Paris, France. Machinery for the artificial production of cold for ice-making, &c	July 31, 1877	155	346	12	203
	Gifford, Asa T. (*See* Higgins & Gifford.)					
192,690	Gifford, N. C. Martin, and P. Abell, Barnhart's Mills, Pa. Pump-rod adjuster	July 3, 1877	142	40	12	32
	Gifford, Thomas H. (*See* Gifford, Thomas J. and T. H.)					
194,866	Gifford, Thomas, J. and T. H., Salem, Mass. Boot and shoe sole pressing-machine	Sept. 4, 1877	109	34	12	415
197,029	Gigrich, Adam, Amityville, N. Y., assignor to Winter & Ball, Jersey City, N. J. Japanning wood	Nov. 13, 1877	311		12	813
189,212	Gilberds, James, Jamestown, N. Y. Butter-pail	Apr. 3, 1877	178	61	11	283
189,094	Gilbert, Albert J., Honeoye, N. Y. Eave-trough fastener	Apr. 3, 1877	72	26	11	569
188,044	Gilbert, Charles W., Worcester, Mass. Yarn-printing machine	Mar. 6, 1877	89	26	11	392
192,982	Gilbert, Frederick A., New Haven, Conn. Window-screen	July 10, 1877	440	132	12	81
	Gilbert, George W. (*See* Collier, Orrin, assignor.)					
7,752	Gilbert, John, Newark, N. J. Bake-pan (Reissue)	June 19, 1877	851	257	11	1105
188,887	Gilbert, John J., Lewisville, Ind. Spark-extinguisher	Mar. 27, 1877	946	288	11	532
186,471	Gilbert, John W., assignor to S. S. White, Philadelphia, Pa. Tool-carrier for dental-engines	Jan. 23, 1877	682	209	11	125
191,135	Gilbert, Joseph, Chicago, Ill. Fire-proof ceiling	May 22, 1877	1059	316	11	909
	Gilbert, Joseph R., *et al.* (*See* King, Sylvester L., assignor.)					
194,867	Gilbert, Thomas S., assignor of one-half interest to Brewster Brothers & Co. Birmingham, Conn. Corset	Sept. 4, 1877	111	34	12	416
7,776	Gilbert, Walter L., Plymouth, Mass. Shuttle for weaving duck, &c. (Reissue)	July 3, 1877	266	78	12	48
191,526	Same. same	June 5, 1877	16	5	11	979
197,358	Gilbert, William, and J. Garrabrant, Jersey City, N. J. Signal for railway draw-bridges	Nov. 20, 1877	663	198	12	878
191,953	Gilchrest, Robert, Louisville, Ky. Fire-escape	June 12, 1877	432	134	11	1038
	Gilchrist, James R. (*See* Backus, James L. and E. W., assignors.)					
196,216	Gilchrist, John, Paisley, Scotland, and A. Anderson, assignors to W. E. Whitehead and A. T. Atherton, Lowell, Mass. Hose-nozzle	Oct. 16, 1877	555	161	12	655
194,083	Gildersleeve, Ezra B., New York. Device for supporting and protecting clothes	Aug. 14, 1877	301	90	12	282
192,754	Giles, E. Walter, Baltimore, Md. Pen-holder tip	July 3, 1877	194	56	12	39
194,425	Giles, E. Walter, New York, N. Y. Pen-holder	Aug. 21, 1877	668	200	12	337
191,045	Giles, Stephen, Patten, Me. Butter-mold	May 22, 1877	975	289	11	897
	Gilham, J., *et al.* (*See* Mason, Albert C., assignor.)					
	Gilpison, James A. (*See* Haptonstall & Preston, assignors.)					
193,404	Gill, Elias, San Francisco, Cal. Copying-press	July 24, 1877	890	272	12	157
185,858	Gill, Jabez H., Philadelphia, Pa. Cartridge-weighing machine	Jan. 2, 1877	43	13, 14	11	14
190,208	Same. Metallic-cartridge	May 1, 1877	95	27	11	758
185,916	Gilleland, John H., Peak's Hill, Ala. Cotton-chopper	Jan. 2, 1877	107	32	11	22
189,353	Gillespie, James E., assignor to Eureka Fire Hose Company, New York, N. Y. Circular-loom	Apr. 10, 1877	348	112, 113	11	612
189,452	Gillespie, Richard S., New York, N. Y. Steam-radiator	Apr. 10, 1877	444	139	11	624
192,755	Gillespie, Richard S., assignor to Hunter, Keller & Co., New York, N. Y. Steam-radiator	July 3, 1877	195	56	12	39
	Gillespie, Simon C. (See Modlin, John W., assignor.)					
	Gillett, Allen H., *et al.* (*See* Hudson, Andrew J., assignor.)					
194,901	Gillett, Ery C., and J. F. Poole, Monroe, Wis. Corn-planter	Sept. 4, 1877	143	45	12	420
	Gillett, E. C. (*See* Poole, Joseph F., assignor.)					
196,889	Gillham, Erastus L., Merritt, Ill. Fence-post	Nov. 6, 1877	160	47	12	782
198,510	Gilliam, Algernon, Pittsburg, Pa. Harness-saddle	Dec. 25, 1877	840	256	12	1091
198,511	Same. same	Dec. 25, 1877	841	256	12	1092
	Gillies, Anna E., *et al.* (*See* Preater, James H., assignor.)					
189,723	Gillies, John, Saint Louis, Mo. Steam slide-valve	Apr. 17, 1877	735	223	11	669
186,826	Gilliland, Samuel B., Salisbury, Mo. Combined seed-planter, sulky-harrow, and cultivator	Jan. 30, 1877	1024	317	11	181
190,677	Gilliland, William, New Brighton, Pa. Binding books	May 15, 1877	603	179	11	840
194,142	Gingras, Joseph G., Shreveport, La., assignor of one-half interest to W. I. McCausland, Dallas Falls, Tex. Plaiting-iron	Aug. 14, 1877	380	112, 113	12	291
	Ginn, Fred. B. (*See* Averill & Ginn.)					
	Ginna, Stephen A., *et al.* (*See* Hipperling, William, assignor.)					
196,349	Ginss, Eugene, New York, N. Y. Gas-burner regulator	Oct. 23, 1877	706	203	12	685
190,026	Girard, Charles F., Paris, France. Fire-extinguisher	Apr. 24, 1877	1059	322	11	721
192,253	Girbardt, Leonhard, assignor to A. Schwarz & Brother, New York, N. Y. Cap	June 19, 1877	767	233	11	1094

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
187,125	Gird, Edward D., Syracuse, N. Y. Ice-loading station	Feb. 6,1877	197	65	11	229
	Giren, Adolphe A. (*See* Laconnue, Marville & Giren.)					
189,621	Girvin Elim R., Strasburg Township, assignor of one-half interest to P. Ritz, Bart, Pa. Pipe-tongs or wrench	Apr. 17,1877	626	194	11	656
191,954	Gissinger, Samuel, assignor of one-half interest to E. W. Swentzel, Pittsburg, Pa. Level	June 12,1877	435	134	11	1039
192,499	Same.....Tool-holder for lathes	June 26,1877	1031	310	11	1140
192,065	Gitchell, Delos W., Orange, N. J. Hat	June 19,1877	573	173	11	1069
192,066	Same.....Machine for shearing hats	June 19,1877	573	173	11	1069
188,045	Githens, Joseph C., New York, N. Y. Steam rock-drill	Mar. 6,1877	89	26	11	392
197,030	Gittens, John K., Brooklyn, New York. Insole for boots and shoes	Nov. 13,1877	312	92	12	813
191,281	Gillis, Albert R., Salem, Ohio. Meat-cutter	May 29,1877	1215	365	11	938
196,008	Gillis, Albert R., Kinsman, Ohio. Cow-fetter	Oct. 9,1877	330	94	12	615
189,354	Gillis, David T., assignor of one-half interest to F. A. Hill, San Leandro, Cal. Traction horse-power	Apr. 10,1877	351	112	11	612
	Gilman, Charles C. (*See* Powers & Gilman)					
190,025	Gilman, Edward L., Somerville, Mass. Mower	Apr. 24,1877	1058	322	11	720
188,290	Gilman, Samuel H., New Orleans, La. Cotton-press	Mar. 13,1877	331	104	11	430
196,292	Same.....Feed-water heater	Oct. 23,1877	649	188	12	676
186,203	Gilmore, William, Chicago, Ill. Corn-planter	Jan. 16,1877	396	121	11	76
190,486	Same.....Seed-planting machinery	May 8,1877	391	114	11	805
	Gilmer, John G. (*See* Werts & Gilmer.)					
187,124	Gilpin, John G., Eagletown, Ind. Fence	Feb. 6,1877	196	64	11	229
198,374	Gilson, Alfred, Paris, France. Umbrella	Dec. 18,1877	692	211	12	1062
194,084	Gilson, Samuel D., Syracuse, N. Y. Purifying water in steam-boilers	Aug. 14,1877	302	90	12	282
188,353	Gilzinger, Sabastian, assignor of one-half interest to A. A. Crosby, Rondout, N. Y. Boy's sled	Mar. 13,1877	392	123	11	439
193,505	Same.....Adjustable thill attachment	July 24,1877	986	298	12	170
195,813	Same.....Machine for forming sled-runners	Oct. 2,1877	119	35	12	578
197,626	Gladding, Charles, Lincoln, Cal. Stoneware-kiln	Nov. 27,1877	955	284	12	924
188,511	Gladding, Henry C., Providence, R. I. Sash-holder	Mar. 20,1877	563	173	11	471
188,122	Gladding, James W., and G. W. Hanxhurst, Hartford, Conn. Postage-stamp holder	Mar. 6,1877	151	46	11	401
191,580	Gladding, John, 3rd, Bristol, R. I. Stove	June 5,1877	65	20	11	986
191,136	Glascock, Frank C., Hillsborough, Ohio. Tack-hammer	May 22,1877	1066	317	11	909
196,750	Gleason, Edward, Chicago, Ill. Fire-proof floor	Nov. 6,1877	14	4	12	762
186,004	Gleason, Franklin A., Brooklyn, N. Y. Stove-pipe elbow machine	Jan. 9,1877	196	60	11	43
189,724	Gleason, George R., assignor to Wilson Packing Company, Chicago, Ill, Gas-heater for soldering-irons	Apr. 17,1877	736	223	11	669
197,465	Gleason, Robert E., assignor of one-half interest to W. L. Turnbull, Muskegon, Mich. } Log-turner	Nov. 27,1877	736	{ 234 235	12	900
191,234	Gleichman, John M., assignor of one-half interest to R. Conner, Stewart, Iowa. Animal-trap	May 29,1877	1172	351	11	933
197,211	Glidden, Charles W., Lynn, Mass. Nailing-machine for boots and shoes	Nov. 20,1877	517	153	12	851
197,212	Same.....Nailing or tacking mechanism for boots and shoes	Nov. 20,1877	518	153	12	851
197,213	Same.....Nailing or tacking machine for boots and shoes	Nov. 20,1877	519	153	12	851
197,214	Same.....Tacking-machine for boots and shoes	Nov. 20,1877	520	153	12	851
	Glidden, Joseph F. (*See* Duffey, George, assignor.)					
	Same.....(*See* Robinson, Ithamer A., assignor.)					
7,566	Glidden, Joseph F., and P. W. Vaughan, De Kalb, Ill., assignors to Washburn & Moen Manufacturing Company, Worcester, Mass., and I. L. Ellwood, De Kalb, Ill. Barbing fence-wire (Reissue)	Mar. 20,1877	770	236	11	499
187,126	Glidden, Joseph F., De Kalb, Ill. Machine for twisting and spooling barbed fence-wire	Feb. 6,1877	197	65	11	230
195,119	Glidden, Joseph F., and P. W. Vaughan, De Kalb, Ill. Sulky-plow	Sept. 11,1877	378	114	12	451
	Globe Nail Company. (*See* Bevelander, Alexander, assignor.)					
	Same.....(*See* Bevelander, Benjamin, assignor) (Reissue.)					
	Same.....(*See* Cady, Ransom G., assignor.)					
7,487	Glover, Edward W., Malden, Mass. Fire-proof cover for books (Reissue)	Feb. 6,1877	275	99	11	239
186,827	Same.....Mail-bag	Jan. 30,1877	1025	317	11	181
186,828	Glover, Edward W., Malden, and E. C. Morris, Boston, Mass. Fire-proof express-chest.	Jan. 30,1877	1027	318	11	181
	Glover, G. W. (*See* Moore, Aaron T., assignor.)					
196,796	Glover, Joseph, Paterson, N. J. Scroll-sawing machine	Nov. 6,1877	58	18	12	769
193,700	Glover, Locke C., Grenada, Miss. Cotton-gin flue	July 31,1877	1204	351	12	210
194,235	Glover, Robert, assignor to self and J. Q. Bull, Leominster, Mass. Treating worn-out sand-paper or emery-cloth to utilize the same	Aug. 14,1877	465		12	303
	Glover, Samuel, *et al.* (*See* Allan, Ethan) (Reissue.)					
	Glover, Walter T. (*See* James, George F., assignor.)					
198,196	Glover, William H., assignor of one-half interest to W. L. Reynolds and F. Best, Saint Louis, Mo. Monkey-wrench	Dec. 18,1877	514	159	12	1035
186,472	Glover, Winslow B., Boston, Mass. Water-tube and circulating steam-boiler	Jan. 23,1877	683	209	11	125
192,646	Gluck, Moritz, New York, N. Y. Punching and shearing machine	July 3,1877	97	28	12	25
191,744	Glue, William, Muskegon, Mich. Refuse-burner	June 5,1877	217	69	11	1006
7,707	Glund, Carl, assignor to Lichtenstein Brothers & Co., New York, N. Y. Cigar-box (Reissue)	May 29,1877	1448	435	11	967
190,306	Gmehlin, Paul, New York, N. Y. Upright piano action frame	May 1,1877	191	57		771
192,500	Goble, Francis E., Saint Louis, Mo. Fire-escape	June 26,1877	1032	311	11	1140
189,453	Gocher, George, Johnstown, Pa. Bench-plane	Apr. 10,1877	445	139	11	624
191,421	Godard, Samuel, Marysville, Mo. Grasshopper-catcher	May 29,1877	1331	401	11	954
190,307	Goddard, Alfred, Essex, Conn., assignor of one-half interest to E. A. Goddard, New York, N. Y. Reamer	May 1,1877	192	57		771
186,830	Goddard, Curtis, Alliance, Ohio. Corn-sheller	Jan. 30,1877	1034	319	11	182
	Goddard, E. A. (*See* Goddard, Alfred, assignor.)					
187,127	Goddard, Ezra J., East Saginaw, Mich. Car-starter	Feb. 6,1877	199	65	11	230
	Goddard, George W. (*See* Whipple, Charles S., assignor.)					
196,575	Goddard, Robert L., Palmer, Mass. Die for shaping and finishing hats	Oct. 30,1877	947	274	12	720
198,601	Goddard, Sextus P., Worcester, Mass. Steam-plow	Dec. 25,1877	920	280	12	1104
7,692	Goddu, Louis, assignor, by mesne assignments, to American Cable Screw Wire Company, Boston, Mass. Machine for nailing boot and shoe soles (Reissue)	May 22,1877	1141	343	11	926
188,354	Goddu, Louis, Winchester, assignor to American Cable Screw Wire Company, Boston, Mass. Machine for making fastenings for the soles of boots and shoes	Mar. 13,1877	393	123	11	439
188,355	Same.....Fastening for soles of boots and shoes	Mar. 13,1877	395	124	11	440
190,575	Same.....Sole-fastening for boots and shoes	May 8,1877	475	142	11	816
198,103	Goddu, Louis, Winchester, assignor to McKay Metallic Fastening Association, Boston, Mass. Sole-channeling machine	Dec. 11,1877	394	121	12	1012

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
188,046	Godeau, Frederic, assignor to P. F. Arbey, Paris, France. Machine for planing wood	Mar. 6, 1877	90	27	11	392
	Godfrey, Cornelius, *et al.* (*See* Clum, Henry A., assignor.)					
	Godley, William. (*See* Morgan & Godley.)					
7,852	Godley, George F., assignor, by mesne assignments, of part interest to C. Scott and M. F. Prudden, Philadelphia, Pa. Car-spring (Reissue)	Aug. 21, 1877	753	224	12	348
7,832	Godley, George F., Philadelphia, Pa., assignor of one-half interest to C. Scott. Car-spring (Reissue)	Aug. 7, 1877	229	68	12	265
	Godley, George F. (*See* Horner, Edwin J., assignor) (Reissue)					
	Godwin, Henry J. (*See* Fager & Godwin.)					
198,602	Godwin, Thomas W., Norfolk, Va. Spark-arrester for steam-boilers	Dec. 25, 1877	921	281	12	1104
186,723	Goehring, Philip, Richmond, Ohio. Fountain-pen	Jan. 30, 1877	922	286	11	167
187,003	Goethals, Charles L., Los Angeles, Cal. Hemmer for sewing machines	Feb. 6, 1877	87	29	11	213
188,888	Same. Corn-planter	Mar. 27, 1877	946	288	11	532
188,124	Goetz, Julius, San Francisco, Cal. Explosive compound	Mar. 6, 1877	153		11	401
185,917	Goetz, Henry A., New Albany, Ind. Ornamenting glass	Jan. 2, 1877	108	32	11	22
194,670	Goetze, George H., Lake Creek, Mo. Harvester-rake	Aug. 28, 1877	903	270	12	379
	Goff, Darius, *et al.* (*See* Cockcroft, John, assignor.)					
198,375	Goff, Darius and D. L., Pawtucket, R. I. Clasp for braid-packages	Dec. 18, 1877	693	211	12	1062
	Goff, Darius L. (*See* Goff, Darius and D. L.)					
	Goff, D. L., *et al.* (*See* Cockcroft, John, assignor.)					
194,868	Goff, Grovner, and H. Hardick, Stevensville, N. Y. Reciprocating churn	Sept. 4, 1877	112	35	12	416
7,469	Goff, James M., North Henderson, assignor, by mesne assignments, to C. M. Avery, Galesburg, Ill., and R. H. Avery, Peaco, Kans. Stalk-cutting machine (Reissue)	Jan. 16, 1877	616	188	11	104
	Goff, L. B., *et al.* (*See* Cockcroft, John, assignor.)					
190,027	Goffette, Henry, Dubuque, Iowa. Step-ladder chair	Apr. 24, 1877	1061	322	11	721
190,678	Gogel, John, Toledo, Ohio. Reversible plow	May 15, 1877	603	179	11	840
7,462	Going, Andrew J., Clinton, La. Corn-planter (Reissue)	Jan. 9, 1877	380	116	11	66
196,217	Going, Francis R., Boston, Mass. Tool for pouncing hats	Oct. 16, 1877	556	162	12	655
196,218	Going, Francis R., Boston, Mass., and S. R. Going, Brooklyn, N. Y. Hat-pouncing machine	Oct. 16, 1877	557	162	12	655
	Going, James A., *et al.* (*See* Going, John B., assignor.)					
188,620	Going, John B., assignor to self and J. A. Going, New York, N. Y., and W. S. Hitch, Laurel, Del. Horseshoe	Mar. 20, 1877	658	203	11	485
	Going, Stephen R. (*See* Going, Francis R. and S. R.)					
191,596	Gold, Joseph S., Washington Court-House, Ohio. Oil-cabinet	Aug. 28, 1877	839	250	12	370
188,243	Gold, Willis D., Philadelphia, Pa. Wrench	Mar. 13, 1877	289	91	11	425
	Gold and Stock Telegraph Company. (*See* Dujardin, Pierre A. J., assignor. (Reissue.)					
	Same. (*See* Pope & Edison, assignors) (Reissue.)					
189,454	Goldback, Abraham, Richmond, Va. Paper box	Apr. 10, 1877	445	140	11	624
	Goldberg, Louis. (*See* Bale & Goldberg.)					
189,855	Golden, Justin J., Toronto, Canada. Railway-switch	Apr. 24, 1877	882	267	11	698
198,197	Same. same	Dec. 18, 1877	515	159	12	1036
195,120	Golding, Moses, Trenton, N. J. Triturating-machine	Sept. 11, 1877	379	114	12	461
188,513	Golding, William, New Orleans, La. Cotton-press	Mar. 20, 1877	564	174	11	471
188,889	Goldschmidt, Abraham, Columbus, Ohio. Combined chair and cradle	Mar. 27, 1877	947	289	11	532
7,480	Goldsmith, Abraham A., Charleston, S. C. Bale-tie (Reissue)	Jan. 30, 1877	1123	347	11	193
	Goldsmith, Adolph. (*See* Elbe, Henry, assignor.)					
188,242	Goldsmith, Charles B., Holyoke, Mass. Shoe-blacking brush	Mar. 13, 1877	289	90	11	425
	Goldsmith, Daniel E. (*See* Mulhollen & Goldsmith.)					
192,430	Goldsmith, J. Mortimer, Boston, Mass. Bale-tie	June 26, 1877	965	289	11	1132
198,603	Same. same	Dec. 25, 1877	922	281	12	1104
190,715	Goldsworthy, John E., Central Falls, R. I. Automatic gate	May 15, 1877	646	191	11	845
190,209	Goll, Alexander, Frankfort-on-the-Main, Prussia. Sleeve-button and stud	May 1, 1877	97	28	11	759
193,602	Gollings, Henry, Pittsburg, Pa. Weather-strip	July 31, 1877	1103	331	12	196
192,983	Gollner, Erwin G., New York, N. Y. Box	July 10, 1877	441	132	12	81
194,816	Same. Folding work-stand	Sept. 4, 1877	61	20	12	409
188,356	Gomber, George W., Sybertsville, Pa. Car-coupling	Mar. 13, 1877	396	124	11	440
	Gompper, Louis. (*See* Gartner, Adolph, assignor.)					
	Gong Bell Manufacturing Company. (*See* Barton, Elijah C., assignor.)					
187,615	Good, Adam, San Francisco, Cal., assignor of one-half interest to J. J. Smith. Umbrella-runner	Feb. 20, 1877	700	217	11	315
197,215	Good, Josias D., assignor to S. T. Lytle, jr., Mount Joy, Pa. Carriage-door lock	Nov. 20, 1877	521	154	12	851
191,668	Good, Levi, assignor of one-third interest to D. C. Broadwell, Schuyler Falls, N. Y. Water-wheel	June 5, 1877	149	46	11	996
186,204	Goodale, Stephen L., Saco, Me. Treating fish-scrap	Jan. 16, 1877	397		11	77
186,339	Goodall, Thomas, Sanford, Me. Pasting-machine	Jan. 16, 1877	533	161 162	11	94
186,829	Goodchild, William H., New York, N. Y., and S. F. Hay, Metuchen, N. J.; said Hay assignor to said Goodchild. Meat and vegetable cutter	Jan. 30, 1877	1028	318 319	11	181 182
	Goode, Samuel. (*See* Mance, Henry C., assignor.)					
186,124	Goodell, Abner C., Salem, Mass., assignor to M. M. Camp and J. E. Searle, jr., New Haven, Conn. Machine for forming sheet-metal tubes	Jan. 9, 1877	310	94	11	58
192,067	Godell, Abner C., jr., Salem, Mass. Apparatus for heating vehicles	June 19, 1877	574	174	11	1069
195,814	Same. Fare-box	Oct. 2, 1877	121	35	12	578
190,308	Goodell, Dexter W., assignor to Florence Machine Company, Florence, Mass. Oil and gas stoves	May 1, 1877	193	57	11	771
197,773	Goodell, George D., Middletown, Conn. Breech-loading fire-arm	Dec. 4, 1877	71	22	12	956
189,309	Goodell, Oliver D., Saint Louis, Mo., assignor to United States Barrel and Stave Company, New York, N. Y. Machine for compressing barrels	Apr. 10, 1877	308	97	11	607
196,576	Gooder, Nimrod, and B. Lavio, Kansasville, Wis. Machine for punching or shearing	Oct. 30, 1877	948	274	12	729
	Goodfellow, James. (*See* Brown, John H., assignor.)					
187,843	Goodhue, Amos P., Fond du Lac, Wis. Box-nailing machine	Feb. 27, 1877	947	294	11	356
198,014	Goodin, James L., Montgomery, Tex. Apparatus for applying poison to plants	Dec. 11, 1877	314		12	1000
185,912	Goodman, Henry, assignor of one-half interest to L. Lockwood, Saint Louis, Mo. Breech-loading fire-arm	Jan. 2, 1877	100	30, 31	11	21
	Goodman, J. W. (*See* Towne, Eugene J., assignor.)					
191,333	Goodnough, Joseph A., Mount Pleasant, Iowa. Roofing-scaffold	May 29, 1877	1228	379	11	945
188,147	Goodrich, Andrew S., assignor to self and H. Goodrich, New York, N. Y. Line-fastener	Mar. 6, 1877	91	27	11	392
196,219	Goodrich, George A., and F. M. Spain, Newton, Iowa. Artificial-stone compound	Oct. 16, 1877	559		12	655
188,890	Goodrich, Hansen, and F. J. Chapman, assignors to selves and W. B. Garner, McLeansborough, Ill. Reversible combination-lock	Mar. 27, 1877	948	289	11	532
195,815	Goodrich, Hansen, McLeansborough, Ill. Combination-lock	Oct. 2, 1877	123	35	12	578
	Goodrich, Harry C. (*See* Barnum, Russel S., assignor.)					
188,792	Goodrich, Harry C., Chicago, Ill. Slate-frame	Mar. 27, 1877	852	258	11	519

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Goodrich, Henry. (*See* Goodrich, Andrew S., assignor.)					
196,028	Goodrich, John E., Sycamore, Ohio. Frame-corner	Apr. 24, 1877	1061	323	11	721
188,123	Goodridge, John C., jr., New York, N. Y. Laying concrete under water	Mar. 6, 1877	152		11	401
193,865	Same.....Repairing structures with beton or concrete	Aug. 7, 1877	63	20	12	243
194,085	Same.....Manufacture of beton	Aug. 14, 1877	303		12	282
195,924	Goodwin, Hannibal, Newark, N. J. Apparatus for setting up music	Oct. 9, 1877	243	69	12	603
191,334	Goodwin, Hiland W., Ionia, Mich. Gate	May 29, 1877	1258	379	11	945
195,001	Goodwin, John H., and D. Woodard, Lamar Station, Mo. Sulky and gang-plow	Sept. 11, 1877	254	77	12	443
187,373	Goodwin, Octavius B., Oil City, and H. Essex, Meadville, Pa. Throttle and check valve	Feb. 13, 1877	455	143	11	276
197,118	Goodwin, William F., Stelton, N. J. Hay-tedder	Nov. 13, 1877	407	120	12	827
198,604	Goodwin, William F., Stelton, assignor of one-half interest to E. F. Roberts, New Brunswick, N. J. Mower	Dec. 25, 1877	922	281, 282	12	1105
188,735	Goodwin, William W., Nevinsville, Iowa. Washing-machine	Mar. 27, 1877	786	241	11	510
186,555	Goodyear, Andrew, Albion, Mich. Support for carriage-tops	Jan. 23, 1877	758	232	11	135
	Goodyear, Miles W. (*See* Bunnell & Goodyear.)					
194,771	Goodyear, Robert B., Philadelphia, assignor of one-half interest to Wolfenden, Shore & Co., Cardington, Pa. Shuttle box motion for power-looms	Sept. 4, 1877	14	4	12	402
198,376	Goold, John C., Albany, N. Y. Thill-coupling	Dec. 18, 1877	694	212	12	1062
192,501	Gorby, John R., Hiramsburg, Ohio. Portable-fence supporter	June 26, 1877	1033	311	11	1141
	Gordan, Lefebra D., *et al.* (*See* King, Sylvester L., assignor.)					
187,616	Gordon, Alexander, J. H. Myers, G. Telford, and M. G. Hubbard, Rochester, assignors to J. I. Hendryx, Cooperstown, N. Y. Harvester	Feb. 20, 1877	701	218	11	315
194,426	Gordon, Alfred, Williamsport, Pa. Spring bed-bottom	Aug. 21, 1877	668	200	12	337
197,119	Gordon, David, Clinton, Pa. Fence	Nov. 13, 1877	408	120	12	827
196,655	Gordon, Frank, Green Spring, Ohio. Gate	Oct. 30, 1877	1025	298	12	740
197,845	Gordon, George W., Beverly, Ohio. Gate	Dec. 4, 1877	139	42	12	965
196,890	Gordon, Gerald, Cincinnati, Ohio. Portable hot-air and vapor bath combined	Nov. 6, 1877	160	47	12	782
190,576	Gordon, Horace L., West Garland, Me. Rotary churn	May 8, 1877	476	142	11	816
194,817	Gordon, James F., Rochester, N. Y. Grain-binder	Sept. 4, 1877	61	20, 21	12	409
198,104	Same.....same	Dec. 11, 1877	395	124, 125	12	1012
193,866	Gordon, James P. and J. W., Coal Valley, Ill. Thrashing-machine	Aug. 7, 1877	63	20	12	243
196,220	Gordon, James P., Coal Valley, Ill., and S. H. Gordon, Karns City, Pa. Water-packing for oil-wells	Oct. 16, 1877	559	162	12	635
197,844	Gordon, James P., Coal Valley, Ill. Wagon-body	Dec. 4, 1877	138	42	12	965
	Gordon, John H. (*See* Curtis, Henry, assignor.)					
193,241	Gordon, John H., Rochester, N. Y. Grain-binder	July 17, 1877	710	217	12	124
	Gordon, John W. (*See* Gordon, James P. and J. W.)					
189,622	Gordon, Rustes, and W. W. Baxter, Boston, Mass. Driving mechanism for ships' pumps	Apr. 17, 1877	627	194	11	656
	Gordon, Samuel H. (*See* Gordon, James P. and S. H.)					
186,126	Gordon, Solomon J., New York, N. Y. Boot and shoe sole	Jan. 9, 1877	312	95	11	58
186,038	Gore, Emory E., Atchison, Kans. Ironing-table	Jan. 9, 1877	230	68	11	47
187,618	Gore, Henry A., Goshen, and G. W. Edgcomb, Lima, Ind. Carpet-sweeper	Feb. 20, 1877	705	218	11	316
197,627	Gorham, Alfred, Brooklyn, N. Y. Filter for faucets or hydrants	Nov. 27, 1877	956	284	12	924
190,309	Gorham, John M., Cleveland, Ohio. Wash-board	May 1, 1877	194	57	11	771
	Gorham, Nathaniel T., *et al.* (*See* Robbins, Elisha, assignor.)					
191,848	Gorman, George, assignor of one-half interest to W. G. Bent, New York, N. Y. Faucet	June 12, 1877	331	103	11	1025
	Gorman, Henry J., *et al.* (*See* McCaffrey, Thomas H., assignor.)					
	Gormully, R. Philip. (*See* Henry, Joseph, assignor.)					
	Gornall, Richard. (*See* Brooks & Gornall.)					
196,797	Gorriti, Estévan, Navarre, and P. Unanue, Guipozcoa, Spain. Automatic feed-water regulator	Nov. 6, 1877	59	18	12	769
	Gortner, Francis M. (*See* Rice & Gortner.)					
191,422	Gosnell, Alexander, assignor of one-half interest to B. F. Mason, Downeyville, Ind. Fence	May 29, 1877	1332	404	11	954
196,350	Goss, Alonzo, Vermillion, Dak. Conductor for lightning-rods	Oct. 23, 1877	707	203	12	685
194,300	Goss, Eugene, Kingston, Wis. Machine for tenoning spokes and boring fellies	Aug. 21, 1877	542	163	12	320
194,143	Gostling, James C., New York, N. Y. Hydraulic cement	Aug. 14, 1877	381		12	291
196,656	Gotham, Amisa P., Chicago, Ill. Artificial fuel or kindler	Oct. 30, 1877	1026	298	12	740
197,267	Gotham, Sanford O., Petrolia, Pa. Explosive compound	Nov. 20, 1877	569		12	859
198,728	Gothard, Ira, Bainbridge, Ky. Water-wheel	Dec. 25, 1877	1052	320	12	1122
	Gotier, Raphael. (*See* Jacques, Edwin, assignor.)					
187,128	Gottfried, Matheus, Chicago, Ill. Beer-cooler	Feb. 6, 1877	209	66	11	220
190,029	Gotthardt, Henry, Louisville, Ky. Wash-boiler	Apr. 24, 1877	1062	323	11	721
7,777	Gottstein, Peter R., Houghton, Mich. Candle for miners' use (Reissue)	July 3, 1877	206		12	48
	Goubert, Auguste A. (*See* Matthiessen & Goubert.)					
191,137	Goubert, Auguste A., New York, N. Y. Centrifugal machine	May 22, 1877	1060	317	11	909
191,527	Goubert, Auguste A., New York, assignor to F. O. Matthiessen, Irvington, N. Y. Device for collecting and saving particles of sugar-liquor rising with the steam from vacuum-pans	June 5, 1877	17	5	11	979
192,068	Goubert, Auguste A., New York, and N. W. Pratt, Brooklyn, N. Y. Rock-drill	June 19, 1877	575	174, 175	11	1069
	Gould, Arthur C. (*See* Chase & Gould.)					
186,338	Gould, Arthur C., Brookline, Mass. Call-bell	Jan. 16, 1877	533	161	11	93
191,581	Same.....Device for preventing the unrolling of tape, &c., from spools	June 5, 1877	66	20	11	986
196,221	Gould, Herbert I., Providence, R. I. Corset-steel	Oct. 16, 1877	560	162	12	655
190,752	Gould, Nathan H., Oakfield Centre, Mich. Turbine water-wheel	May 15, 1877	678	201	11	850
186,722	Gould, Samuel A., Osgood, Ind. Wash-board	Jan. 30, 1877	921	285	11	167
196,751	Gould, Simeon L., Gardiner, Me. Pulp-engine	Nov. 6, 1877	15	4	12	762
193,943	Gould, Thomas S., assignor to self and T. P. Saunders, Hartford, Conn. Stringing piano-fortes	Aug. 7, 1877	144	41	12	254
187,267	Gould, William B., Montrose, and N. Feick, Newark, N. J., assignor to said Gould. Machine for making trunk-corner clamps	Feb. 13, 1877	348	111	11	262
195,499	Gould, William B., Montrose, N. J. Carriage-curtain fastener	Sept. 25, 1877	777	228	12	533
196,657	Same.....Caster for trunks	Oct. 30, 1877	1027	298	12	741
186,421	Gould, William C., New York, N. Y. Nut-lock	Jan. 23, 1877	632	193	11	119
	Gould, William R. (*See* Kimplen, Cornelius, assignor.)					
	Goulden, James, *et al.* (*See* Boynton, Nathan S., assignor.)					
	Same (*See* Lectire, Francis, assignor.)					
188,736	Goulding, John, Worcester, Mass. Ring-spinning	Mar. 27, 1877	786	241	11	510
192,162	Gourd, Ernest W., Franklin, N. H. Camp-stool	June 19, 1877	668	204	11	1081
	Gove, Charles F. (*See* Gove, John C. and G. H., assignors.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Gove, George H. (*See* Gove, John C. and G. H.)					
187,617	Gove, John C. and G. H., assignors of one-third interest to C. F. Gove, Cleveland, Ohio. Washing-machine	Feb. 20, 1877	704	218	11	316
198,377	Gowdy, William E., assignor of one-half interest to J. C. Brush, Newburg, N. Y. Machine for shearing and napping hats, &c	Dec. 18, 1877	696	212	12	1062
	Gowing, Daniel H., *et al.* (*See* Wright, William A., assignor.)					
	Grabendike, W. G. (*See* Reed, Asdrubal, assignor.)					
194,236	Grable, William B., and C. K. Pickles, Saint Louis, Mo. Warehouse-truck	Aug. 14, 1877	466	141	12	303
193,242	Grace, Patrick H., Sedalia, Mo. Spark-arrester	July 17, 1877	711	218	12	124
192,823	Gracey, Robert, assignor to self and W. L. Gracey, Liverpool, Ohio, and C. M. Fairman, Pittsburg, Pa. Machinery for the manufacture of pottery	July 10, 1877	294	86	12	60
	Gracey, William L., *et al.* (*See* Gracey, Robert, assignor.)					
	Graef, Charles H. (*See* Hackenberg, Julius, assignor.)					
193,701	Graef, Charles H., Edgewater, N. Y. Bracelet, &c	July 31, 1877	1205	361	12	210
	Grafelmann, Adolph D. (*See* Grafelmann, Frederick and A. D.)					
194,347	Grafelmann, Frederick, Middle Village, and A. D. Grafelmann, New York, N. Y. Apparatus for testing bank-checks, &c	Aug. 21, 1877	594	177	12	327
188,891	Graham, Alexander, Mumford, N. Y. Post-hole auger	Mar. 27, 1877	949	290	11	532
198,455	Graham, Alexander, Wheatland, N. Y. Vehicle running-gear	Dec. 25, 1877	785	238	12	1034
194,517	Graham, Edmund H., assignor of part interest to R. W. Randall, W. F. Lunt, J. B. Palmer, and C. Hardy, Biddeford, Me. Loom	Aug. 28, 1877	771	229	12	360
196,795	Graham, Edmund H., assignor of three-eighths interest to R. W. Randall, Biddeford, Me. Shuttle-motion	Nov. 6, 1877	57	17	12	769
	Graham, Edward, *et al.* (*See* Milne, Robert D., assignor.)					
	Graham, Edward H. (*See* Thompson, Robert P., assignor.)					
190,966	Graham, Edward H., Philadelphia, Pa. Sectional steam-boiler	May 22, 1877	897	265	11	887
191,046	Graham, George W., Grand Junction, Tenn. Alarm-lock	May 22, 1877	975	289	11	897
188,463	Graham, Henry S., Indianola, Iowa. Roaster and warmer	Mar. 20, 1877	517	160	11	465
197,265	Graham, Jesse A., assignor to J. W. Wayne, Cincinnati, Ohio. Carpet-cleaner	Nov. 20, 1877	568	168	12	858
197,117	Graham, John, Chicago, Ill. Faucet	Nov. 13, 1877	406	119	12	826
195,500	Graham, Joseph M., Bloomfield, assignor to self and G. Elliott, Bedford, Ind. Automatic cylinder-cock	Sept. 25, 1877	778	228	12	534
186,125	Graham, Miles G., assignor of two-thirds interest to A. W. Hunt and J. O. Adsit, Hornellsville, N. Y. Extension stove-pipe	Jan. 9, 1877	311	95	11	58
192,984	Graham, Samuel, Freeport, Ill. Car-starter	July 10, 1877	441	133	12	81
190,311	Graham, Simon P., London, Canada. Metal wagon-body	May 1, 1877	196	58	11	771
191,800	Graham, William A., Carlisle, Pa. Brick-machine	June 12, 1877	279	87, 88	11	1019
187,972	Gram, Henry, Cleveland, Ohio. Calendar	Mar. 6, 1877	16	4	11	383
195,434	Grandperret, Louis L., New York, N. Y. Toy watch	Sept. 18, 1877	699	207	12	515
198,540	Graner, John, New Orleans, La. Revolving cultivator	Dec. 25, 1877	866	264	12	1095
185,913	Granger, Almon M., New Orleans, La. Chemical fire-extinguisher for vessels, &c	Jan. 2, 1877	101	31	11	21
187,973	Granger, Elihu J., Brooklyn, N. Y. Constructing barrels	Mar. 6, 1877	17	5	11	383
	Granger, Lewis, *et al.* (*See* Kidder, George R., assignor.)					
187,844	Granger, Lewis, Armada, Mich. Fruit-drier	Feb. 27, 1877	949	294	11	356
194,144	Grannan, Joseph C., Cincinnati, Ohio. Washing-machine	Aug. 14, 1877	381	113	12	291
	Grant, Elijah B. (*See* Collins & Grant.)					
190,136	Grant, George H., Richmond, Ind. Railway rail-joint	May 1, 1877	23	6	11	749
	Grant, John. (*See* Taylor, Carlo R., assignor.)					
192,824	Grant, John J., Hartford, Conn. Gage for the manufacture of the chasers of screw-cutting dies	July 10, 1877	297	86, 87	12	61
	Grant, John R. (*See* Grant, Peter, assignor.)					
198,605	Grant, Malcolm, and J. J. Henry, Baltimore, Md. Wheat-cracking machine	Dec. 25, 1877	926	282	12	1105
189,095	Grant, Peter, Clinton, assignor to self and J. R. Grant, Brussels, Canada. Horse hay-fork	Apr. 3, 1877	73	27	11	569
	Grason, B. F., jr. (*See* Lichliter, John M., assignor.)					
197,464	Gratiot, Edward H., Platteville, Wis. Grain-heater	Nov. 27, 1877	785	234	12	900
187,129	Gratz, Siegfried F. Philadelphia, Pa. Hand-stamp	Feb. 6, 1877	201	66	11	230
	Graveline, David U. (*See* Nutting & Graveline.)					
193,702	Graves, Clinton E., assignor of one-half interest to S. Sampson, Galveston, Tex. Cotton-harvester	July 31, 1877	1206	361 362	12	210
	Graves, Edward A. (*See* Graves, Edward H., L. L., and E. A.)					
189,725	Graves, Edward H., L. L., and E. A., Batavia, Ill. Rice-huller	Apr. 17, 1877	727	224	11	669
193,814	Graves, Frederick D., Boston, Mass. Sectional boat	Aug. 7, 1877	16	6	12	236
196,891	Graves, George F., Mount Upton, N. Y. Spoke-socket	Nov. 6, 1877	161	48	12	783
191,047	Graves, John, New York, N. Y., assignor to self and J. L. Miller, Westfield, N. J. Oil can	May 22, 1877	976	290	11	897
192,254	Graves, John, New York, assignor to self and H. W. Shepard, Brooklyn, N. Y. Washboard	June 19, 1877	768	234	11	1094
196,083	Graves, John, New York, N. Y. Can for transporting liquids	Oct. 16, 1877	418	121	12	636
186,205	Graves, Lorenzo S., Rochester, N. Y. Buffing-rolls for the soles of boots and shoes	Jan. 16, 1877	397	121	11	77
	Graves, Louis L. (*See* Graves, Edward H., L. L., and E. A.)					
186,005	Graves, Nathaniel S., assignor to self and F. F. Woods, Boston, Mass. Rowlock		197	60	11	43
	Graves, Ormond F. (*See* Sheldon & Graves.)					
	Graves, Thomas L. (*See* Jones, Byron, assignor.)					
190,310	Graves, Timothy H., Granville, Ohio. Cooling-board	May 1, 1877	195	58	11	771
193,158	Grawitz, William J. S., Paris, France. Dyeing yarns and fabrics in aniline black	July 17, 1877	620		12	113
	Gray, Carroll E., *et al.* (*See* Duecker, Conrad, assignor.)					
	Gray, David, *et al* (*See* Whitaker, John A., assignor.)					
	Gray, Edwin N. (*See* Noyes, George E., assignor.)					
190,312	Gray, Edwin N., and G. E. Noyes, Washington, D. C. Combined adjustable engine and screw-propeller	May 1, 1877	197	58	11	771
186,340	Gray, Elisha, Chicago, Ill., assignor to Harmonic Telegraph Company, New York. Electro-harmonic telegraph	Jan. 16, 1877	534	162	11	94
194,671	Gray, Elisha, Chicago, Ill., assignor, by mesne assignments, to Harmonic Telegraph Company, New York, N. Y. Local-circuit breaker for electro-harmonic telegraphs	Aug. 28, 1877	905	270	12	379
198,378	Gray, Elisha, Chicago, Ill. Morse telephonic system of telegraphy	Dec. 18, 1877	697	212	12	1062
198,379	Gray, Elisha, Chicago, Ill., assignor, by mesne assignments, to Harmonic Telegraph Company, New York, N. Y. Receiver for electric-harmonic telegraphs	Dec. 18, 1877	698	212	12	1062
195,758	Gray, George S., Cincinnati, Ohio. Curing meat	Oct. 2, 1877	66		12	576
191,048	Gray, Jacob, Schenectady, assignor of one-half interest to C. H. Toll, Scotia, N. Y. Broom-winding machine	May 22, 1877	977	290	11	897
187,619	Gray, James H., Washington, Iowa. Churn attachment	Feb. 20, 1877	706	219	11	316

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page
186,473	Gray, James M., deceased, by S. F. Gray, administrator, Valdosta, Ga. Automatic fan	Jan. 23, 1877	684	210	11	125
192,647	Gray, Leonidas W. P., New Orleans, La. Safety attachment for lamps	July 3, 1877	98	28	12	25
198,198	Gray, Robert W., and T. S. Foster, Laconia, N. H. Abdominal supporter	Dec. 18, 1877	516	159	12	1036
	Gray, Seward F., administrator. (*See* Gray, James M.)					
189,726	Gray, Solomon S., South Boston, assignor to T. N. Page, Boston, Mass. Paper collar	Apr. 17, 1877	728	224	11	669
196,524	Gray, Thomas B., and J. D. Knox, Topeka, Kans. Windmill	Oct. 30, 1877	897	259	12	722
186,420	Gray, Whitley F., Sherman, Tex. Churn	Jan. 16, 1877	632	193	11	119
	Gray, William, administrator. (*See* Enos, Joab)				(Reissue.)	
192,985	Graydon, James W., assignor to M. E. Graydon, Indianapolis, Ind. Station-indicator	July 10, 1877	442	133	12	81
	Graydon, Mary E. (*See* Graydon, James W., assignor.)					
	Grayson, Benjamin F., jr. (*See* Lillard, Trenton W., assignor.)					
192,577	Greacen, John, jr., New York, N. Y. Wringer-roll	July 3, 1877	23	7	12	15
195,599	Greasly, Edmund, Philadelphia, Pa. Knitted fringe	Sept. 25, 1877	869	258	12	547
187,620	Greaves, James, Philadelphia, Pa. Condensing-cylinder for carding-engines	Feb. 20, 1877	706	219	11	316
190,313	Greaves, James, Waco, Tex. Cotton cleaner and condenser	May 1, 1877	197	58, 59	11	772
190,314	Same. Cotton-cleaner	May 1, 1877	198	59	11	772
	Greeley, John P. (*See* Buxton & Greeley.)					
	Greeley, Joseph, *et al.* (*See* Harris, Samuel, jr., assignor.)					
187,755	Green, Cyrus, Hespeler, Canada, Force-pump	Feb. 27, 1877	855	266	11	344
	Green, David A. (*See* Green & Williamson.)					
194,772	Green, Edmund, and A. Halsey, San Francisco, Cal. Shaft-furnace for roasting ores	Sept. 4, 1877	15	4, 5	12	403
7,969	Green, Elisha T., Stoneham, Mass., assignor, by mesne assignments, to J. W. Brooks, trustee. Machine for cutting boot and shoe heels	Nov. 27, 1877	1058	317	12	937
					(Reissue)	
194,237	Green, Francis D., Williamsport, Pa. Circular-sawing machine	Aug. 14, 1877	467	141	12	304
196,892	Green, Frank, Columbia, S. C. Apparatus for preparing surgical bandages	Nov. 6, 1877	162	48	12	783
188,125	Green, George F., Kalamazoo, Mich. Grain-binder	Mar. 6, 1877	153	46, 47, 48	11	401
197,120	Green, Henry C., Chicago, Ill. Churn	Nov. 13, 1877	409	120	12	827
198,015	Green, Henry W., and G. W. Hoag, San Jacinto, and T. P. Cleaveland, Mountain House, Cal. Railway air-brake	Dec. 11, 1877	314	97	12	1060
191,335	Green, Ira H., Canandaigua, N. Y. Band-cutting feeder for thrashing-machines	May 29, 1877	1259	380	11	945
190,315	Green, John, assignor of one-half interest to J. M. McKeo, Sunbury, Pa. Formers for making follower-plates for draw-heads	May 1, 1877	199	59	11	772
197,929	Green, John, Joliet, Ill. Boot and shoe	Dec. 11, 1877	230	70	12	987
	Green, John A. (*See* Wyckoff, George D., assignor.)					
193,944	Green, John A., and A. J. Knapp, Allegan, Mich. Picket fence	Aug. 7, 1877	144	44	12	254
	Green, John S. (*See* Rankin, Robert G., assignor.)					
194,038	Green, John W., Pontiac, Mich. Pen-holder	Aug. 14, 1877	259	76	12	276
191,955	Green, Robert D., Columbus, Miss. Motive power	June 12, 1877	436	134, 135	11	1039
	Green, Samuel W. (*See* Lorenz & Hughes, assignors.)					
192,756	Green, Sidney H., and A. and H. Tifft, Brooklyn, N. Y. Box for collars and other articles, with top for games	July 3, 1877	196	56	12	39
	Green, Troutman & Company. (*See* Troutman & Green, assignors.)					
195,002	Green, Walter S., Long Branch, N. J. Life-saving apparatus	Sept. 11, 1877	255	78	12	443
196,351	Green, William, Chicago, Ill. Sheet-metal-can machine	Oct. 23, 1877	707	204	12	685
	Green, William A. (*See* Whittemore & Green.)					
	Green, William H. H. (*See* Troutman & Green.)					
192,621	Green, William P. and D. A., and J. W. Williamson, Rushville, Ind. Cabinet-bed	July 3, 1877	67	20	12	21
194,869	Green, William W., jr., assignor to self, E. N. Niegelsen, and J. M. Shields, Chicago, Ill. Mortising-machine	Sept. 4, 1877	112	35	12	416
	Greenalch, Richard. (*See* Loftus, John, assignor.)					
188,291	Greenawalt, Jacob, Pittsburg, Pa. Roofing-tile machine	Mar. 13, 1877	333	105	11	431
192,986	Greenawalt, Jacob, Pittsburg, and J. C. Anderson, Allegheny, Pa. Manufacture of brick	July 10, 1877	443	133	12	81
	Greene, Arthur H. (*See* Van Pelt, John S., jr., assignor.)					
194,145	Greene, Charles P., Providence, R. I. Churn	Aug. 14, 1877	383	113	12	292
196,222	Greene, Gilbert, New Lots, N. Y. Belt-tightener	Oct. 16, 1877	562	163	12	656
7,533	Greene, James, Providence, R. I. Box for case-hardening	Feb. 27, 1877	1058	326	11	371
					(Reissue)	
190,210	Greene, James B., Elliott, Cal. Harrow	May 1, 1877	97	28	11	759
192,255	Greene, James B., assignor of one-half interest to N. Greene, Coatesville, Ind. Corn-planter	June 19, 1877	769	234	11	1094
	Greene, John F. (*See* Briggs, Greene, & Radikin.)					
193,506	Greene, John F., Brooklyn, N. Y. Hydraulic fire-escape	July 24, 1877	987	299	12	170
193,945	Same. Embossing felted fabrics	Aug. 7, 1877	145	44	12	254
193,649	Greene, John F., Brooklyn, assignor to Angora Woolen Company, New York, N. Y. Treating animal fiber	July 31, 1877	1158		12	203
	Greene, Nelson. (*See* Greene, James B., assignor.)					
187,004	Greene, Nelson L., Edmeston, N. Y. Water-wheel	Feb. 6, 1877	88	30	11	213, 214
191,849	Greene, Rollin C., assignor to self and N. P. Chaney, Potsdam, N. Y. Milk-cooler	June 12, 1877	333	103	11	1025
	Greenfield, Ernest. (*See* Cauhape, Pierre, assignor.)					
	Greenleaf, Joseph H. (*See* Parker & Greenleaf.)					
197,266	Greenleaf, Thoro F., Westborough, Mass. Oven-lamp	Nov. 20, 1877	569	168	12	859
196,117	Greenleaf, William A., assignor of one-half interest to E. Over, Indianapolis, Ind. Hoisting-jack	Oct. 16, 1877	461	134	12	641
	Greenlee, Ralph S. (*See* Reed & Greenlee.)					
189,727	Greenough, Benjamin F., Brooklyn, assignor of one-half interest to J. J. Nichols, New York, N. Y. Apparatus for producing illuminating-gas	Apr. 17, 1877	730	224, 225	11	670
185,859	Greenough, John J., Syracuse, N. Y. Flexible motor for horse-brushes	Jan. 2, 1877	44	14	11	14
185,860	Same. Apparatus for actuating boring, cutting, and polishing tools	Jan. 2, 1877	45	14	11	14
188,793	Same. Hinge for awning-blinds	Mar. 27, 1877	852	259	11	519
196,352	Greenwalt, Abraham B., Millersville, Pa. Crayon-holder	Oct. 23, 1877	769	204	12	685
195,600	Greenwood, Anthony, North Troy, Vt. Picture-frame	Sept. 25, 1877	870	258	12	547
	Greenwood, Arthur. (*See* Kritch & Greenwood.)					
188,292	Greenwood, Chester, Farmington, Me. Ear-muffler	Mar. 13, 1877	334	105	11	431
186,832	Greenwood, George W., Columbus, Ohio. Sewer-trap	Jan. 30, 1877	1036	320	11	182
186,833	Same. Fire-kindler	Jan. 30, 1877	1037	320	11	182
	Greenwood, John, (*See* Hazard & Greenwood.)					
7,912	Greenwood, Thomas J., Warren, Ill., assignor to self and T. D. Thornton. Boot and shoe	Oct. 16, 1877	630	182	12	665
					(Reissue.)	
190,753	Greenwood, Thomas J., assignor to self and T. D. Thornton, Warren, Ill. Boot and shoe	May 15, 1877	678	201	11	850
	Greer, B. A. F. (*See* McCloy, Eli C., assignor.)					
	Greer, Benjamin A. F. (*See* Benedict & Greer.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
191,956	Greer, Jesse W., Prince of Wales, Ky. Harrow	June 12, 1877	437	135	11	1039
187,224	Greer, Howard, Harmar, Ohio. Machine for rerolling and reducing old rails	Feb. 13, 1877	306	100	11	236
197,628	Gregg, Isaac, jr., Philadelphia, Pa. Machine for re-pressing bricks	Nov. 27, 1877	957	281	12	924
186,831	Gregg, John, assignor to self and J. Miller, Riverton, Iowa. Pile-driver	Jan. 30, 1877	1035	319	11	182
185,915	Gregg, Marshall, Chamois, Mo. Corn-planter	Jan. 2, 1877	106	32	11	22
193,757	Same.....same	July 2, 1877	197	56, 57	12	39
195,359	Gregg, William, Mason, Mich. Stone and log-sled	Sept. 18, 1877	624	185	12	504
185,914	Gregg, William H., Saint Louis, Mo. Artificial worm-bait for fishing	Jan. 2, 1877	105	31	11	22
192,431	Gregg, William L., Philadelphia, Pa. Brick-machine	June 26, 1877	966	290	11	1132
197,727	Gregory, Charles A., assignor of one-half interest to D. B. Towsley, Montreal, Canada. Fire-escape	Dec. 4, 1877	19	6	12	949
	Gregory, George. (*See* Hellman & Gregory.)					
	Gregory, George W. (*See* Duryee, John K., assignor.)					
190,487	Gregory, James H., Columbia, Tenn. Blacksmith's tongs	May 8, 1877	392	114	11	805
	Gregory, James T. (*See* Guinn, John B., assignor.)					
	Grely, H. S., *et al.* (*See* Milne, Robert D., assignor.)					
7,841	Gretter, Victor, Saint Petersburgh, Pa. Casing-spear for use in oil-wells...(Reissue)	Aug. 14, 1877	518	157	12	309
190,316	Grey, John D., Baltimore, Md. Apparatus for pickling sheet-iron	May 1, 1877	200	59	11	772
194,552	Gridley, James E., Saint Paul, Minn. Heating-stove	Aug. 28, 1877	802	239	12	364
190,317	Griendling, John, Philadelphia, Pa. Barber's chair	May 1, 1877	200	60	11	772
186,127	Grier, George S., Milford, Del. Saw-set	Jan. 9, 1877	312	95	11	58
	Grier, William W. (*See* Saladee, Cyrus W., assignor) ...(Reissue.)					
197,930	Grier, William W., Hulton, Pa. Side-spring vehicle	Dec. 11, 1877	231	71	12	988
	Griffin, John, *et al.* (*See* Bonzano, Adolphus, assignor.)					
194,086	Griffin, Caleb H., Lynn, assigner of one-half interest to D. Knox, Saugus, and one-fourth interest to E. E. Durgin, Malden Centre, Mass. Instrument for draughting patterns	Aug. 14, 1877	305	90, 91	12	282
195,925	Griffin, Caleb H., Lynn, assignor of one-half interest to E. E. Durgin, Malden Centre, Mass. Dress-makers' square	Oct. 9, 1877	244	69	12	603
195,926	Same.....Draughting apparatus for ladies' dresses	Oct. 9, 1877	248	70	12	604
193,082	Griffin, Ebenezer, Syracuse, N. Y. Machine for forming sheet-metal pipe-coupling	July 17, 1877	543	164	12	102
197,774	Griffin, Robert S., Worcester, Mass. Blind-slat planer	Dec. 4, 1877	72	22	12	956
196,293	Griffin, Thomas W., Garretson's Landing, Ark. Connecting-link	Oct. 23, 1877	651	188	12	676
197,846	Griffing, Charles S. S., Columbus, Ohio Fence	Dec. 4, 1877	139	42	12	965
	Griffith & Byrne. (*See* Johnson, Edward H., assignor.)					
192,330	Griffith, Fred. N., Shell Rock, Iowa. Washing-machine	June 26, 1877	871	263	11	1119
	Griffith, Federick W., *et al.* (*See* Browne, James W., assignor.)					
189,556	Griffith, Frederick W., and G. P. Byrne, New York, N. Y. Printing-press	Apr. 17, 1877	561	175	11	648
189,728	Griffith, Frederick W., G. P. Byrne, and A. Shedlock, New York, N. Y.; said Shedlock assignor to said Griffith & Byrne. Printing-press	Apr. 17, 1877	732	225	11	670
193,243	Griffith, Samuel R., Bloomington, assignor to J. R. Dodge, jr., and W. T. Shurtleff, Normal, Ill. Fruit-drier	July 17, 1877	712	218	12	124
190,429	Griffith, William D., Vincennes, Iowa. Windmill	May 8, 1877	332	97	11	798
	Griffith, William H., jr., *et al.* (*See* Bowden, John B., assignor.)					
192,987	Griffith, William J., Brooklyn, N. Y. Scoop	July 10, 1877	414	134	12	81
197,775	Grigsby, Rush S., Fayetteville, Tenn. Ventilator	Dec. 4, 1877	73	23	12	956
198,456	Grim, Abraham K., and J. B. Low, San Francisco, Cal. Combined overflow-valve and gas-trap for stationary wash-basins	Dec. 25, 1877	786	239	12	1084
198,457	Same.....Stench-trap	Dec. 25, 1877	787	239	12	1084
190,578	Grimes, Royal E., Rutland, Ohio. Reciprocating churn	May 8, 1877	478	142	11	817
190,577	Grin, Camille, Paris, France. Life-preserving dress	May 8, 1877	477	142	11	817
188,794	Grinter, Thomas W., assignor of one-half interest to J. F. Jewett, Cincinnati, Ohio. Paper-bag machine	Mar. 27, 1877	853	259 260	11	519
195,501	Same.....same	Sept. 25, 1877	778	228 229 230	12	534
189,856	Griscom, Frederic, Dolington, Pa. Lifting-jack	Apr. 24, 1877	883	270	11	698
	Griscom, Samuel E. (*See* McFeely, Thomas, assignor.)					
	Same.....(*See* Moore, Leonard, assignor.)					
	Same.....same(Reissue.)					
186,556	Griscom, William M., and F. Grossman, Reading, Pa., assignors to said Griscom. Reversible-knob-latch	Jan. 23, 1877	759	233	11	135 136
191,138	Griscom, William M., Reading, Pa. Apple-parer	May 22, 1877	1061	317	11	909
191,669	Same.....Combined apple parer and corer	June 5, 1877	150	46	11	996
191,670	Same Apple parer and corer	June 5, 1877	151	47	11	996
197,847	Same.....Key for locks	Dec. 4, 1877	140	42	12	966
197,848	Same.....Sash-fastener	Dec. 4, 1877	140	43	12	966
188,621	Grissinger, Theodore, Mechanicsburg, Pa. Sleigh-runner for wagons	Mar. 20, 1877	659	204	11	485
7,895	Griswold, Catharine A., New York, N. Y. Corset ...(Reissue)	Sept. 25, 1877	956	286	12	559
7,993	Same.....Skirt-supporting corset ...(Reissue)	Oct. 9, 1877	368	111 112	12	624
193,368	Griswold, Charles E., Brooklyn, N. Y. Syringe	July 24, 1877	858	262	12	152
188,795	Griswold, Lev., assignor to D. Hays, Johnstown, N. Y. Combined alarm-lock and door-bell	Mar. 27, 1877	857	260	11	519
	Griswold, Matthew, jr. (*See* Selden, Griswold & Crump.)					
	Same.....(*See* Selden, Griswold & Hanchett.)					
187,130	Great, Elias, assignor to M. B. Pond, Napa, and W. Cantelon, Vacaville, Cal. Churn	Feb. 6, 1877	202	66	11	230
189,355	Groat, Julius W., Fremont, Ohio. Vehicle-spring	Apr. 10, 1877	352	113	11	612
	Groat, Peter B. (*See* Chadwick, Charles, assignor.)					
	Groeninger, Rudolph. (*See* Fenn & Groeninger.)					
	Groeschel, August. (*See* Bagnicki & Groeschel.)					
194,757	Groff, Adam B., Bareville, Pa. Combined seeder and cultivator	Aug. 28, 1877	991	294	12	390
198,458	Grogan, Francis T., Indianapolis, Ind. Saw-gage	Dec. 25, 1877	788	239	12	1084
	Grom, Andreas. (*See* Baur & Grom.)					
192,913	Groocock, Samuel P., New York, N. Y. Manufacture of ornamental wood-surfaced floor-covering and wainscoting	July 10, 1877	377	112	12	71
195,816	Groom, Wallace P., Brooklyn, N. Y. Sampling-package	Oct. 2, 1877	123	35	12	578
195,212	Grose, Anda D., Tilton, Ky. Fluting and polishing iron	Sept. 18, 1877	486	143	12	484
	Gross, Emily. (*See* Gross, Samuel E., assignor.)					
187,845	Gross, Jarrett, Catlettsburg, Ky. Motive-power	Feb. 27, 1877	950	295	11	356
186,834	Gross, Joseph L., Akron, Ohio. Mouth-piece for cigars	Jan. 30, 1877	1038	320	11	182
	Gross, Rudolph. (*See* Wessell, Nickel & Gross.)					
188,357	Gross, Samuel E., Chicago, Ill. Stone pavement	Mar. 13, 1877	397	121	11	440
198,006	Gross, Samuel E., assignor to E. Gross, Chicago, Ill. Pavement	Dec. 25, 1877	927	282	12	1105

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
197,513	Gross, William, assignor to self and C. Rommelsbacher, New York, N. Y. Picture-nail.	Nov. 27, 1877	836	250	12	906
188,796	Grosskopf, Louis, Königsberg, Prussia. Manufacture of cigarettes	Mar. 27, 1877	857	261	11	519
196,444	Grossler, Wilhelm, Ruisscina, near Nossen, Saxony, assignor to C. Pieper, Dresden, Germany. Bench-plane	Oct. 23, 1877	792	228	12	697
	Grossman, Francis. (*See* Griscom & Grossman.)					
191,757	Groth, Charles, San Francisco, Cal. Tool-handle	June 12, 1877	240	76	11	1014
195,502	Grout, William L., East Stoughton, Mass. Sewing-machine	Sept. 25, 1877	781	230	12	534
187,621	Grove, Edwin W., Paris, Tenn. Pencil-holder	Feb. 20, 1877	708	219	11	316
197,355	Grove, Fullerton A., Kirksville, Mo. Sash-fastener	Nov. 20, 1877	660	196	12	873
193,815	Grove, John A., Bluffton, Ind. Ditching-machine	Aug. 7, 1877	18	6	12	237
196,658	Grove, John C., Staunton, Va. Coffee-pot	Oct. 30, 1877	1028	298	12	741
194,301	Grove, Richard, North Lima, Ohio. Car-coupling	Aug. 21, 1877	542	164	12	320
195,360	Grover, Henry M., Vinton, Iowa. Car-coupling	Sept. 18, 1877	625	185	12	504
	Grubbs, T. F., *et al.* (*See* Todd, George W., assignor.)					
187,846	Gruwell, Robert M., and C. Newhouse, Stockton, Cal. Spring bed-bottom	Feb. 27, 1877	950	295	11	356
193,603	Grzybowski, Julian, Chicago, Ill. Fire-engine	July 31, 1877	1104	331	12	196
186,725	Guardiola, José, Chocolá, Guatemala. Heater	Jan. 30, 1877	923	286	11	167
187,268	Same.....Grain-drier	Feb. 13, 1877	349	111	11	262
190,030	Gue, Albert F., assignor of one-half interest to G. F. Field, Boston, Mass. Exhaust-valve for air-brakes	Apr. 24, 1877	1063	323	11	721
195,003	Guels, Herman, assignor of one-half interest to W. E. Pollack, Saint Louis, Mo. Preventing the noise of escaping steam	Sept. 11, 1877	256	78	12	443
196,659	Guenther, Edward, and F. Hoeppner, New York, N. Y. Bung	Oct. 30, 1877	1028	299	12	741
186,128	Guerrero, Enrique, Havana, Cuba. Belt-coupling	Jan. 9, 1877	313	95	11	58
189,893	Guest, Henry W., New London, Conn., assignor to Asbestos Packing Company, Boston, Mass. Machine for making asbestos packing	Apr. 24, 1877	924	281	11	703
193,650	Guest, John H., Brooklyn, N. Y. District and fire-alarm telegraph	July 31, 1877	1158	{346 347}	12	203
196,445	Same.....Circuit-controller for burglar-alarms	Oct. 23, 1877	793	229	12	697
197,121	Güettermann, Adam, Belleville, Ill. Heating-furnace	Nov. 13, 1877	410	120	12	827
	Guffy, West. (*See* Reed, Samuel H., assignor.)					
192,622	Guild, Augustus, and B. S. Lewis, Middletown, Conn. Steam and water cock	July 3, 1877	68	20	12	21
	Guild, Chester. (*See* Cherrington, Robert E., assignor.)					
190,579	Guild, Edgar H., New York, N. Y. Stopper-lock for decanters	May 8, 1877	479	143	11	817
191,336	Same.....Coin-holder	May 29, 1877	1260	380	11	945
198,380	Guild, Edward B., Topeka, Kans. Rein-holder	Dec. 18, 1877	698	213	12	1062
197,728	Guild, George M., Boston, Mass. Station-indicator	Dec. 4, 1877	20	6	12	949
194,672	Guild, William H., jr., Brooklyn, N. Y. Steam-pump	Aug. 28, 1877	907	270	12	380
192,691	Guilder, Absalom R., Minneapolis, Minn. Turbine water-wheel	July 3, 1877	143	40	12	32
	Guillemare, Achille. (*See* Labarthe, Guillemar & Pallas.)					
	Same.....(*See* Lecourt & Guillemare.)					
193,244	Guillemin, Adolph, and J. Lehman, Lanesborough, Minn. Strainer	July 17, 1877	713	218	12	125
196,223	Guinn, John B., assignor of one-half interest to J. T. Gregory, Athens, Tenn. Churn	Oct. 16, 1877	563	163	12	656
	Gumpert, George W. (*See* Levy, David H., assignor.)					
193,816	Gundlach, Ernst, assignor of one-half interest to J. J. Bausch, Rochester, and H. Lomb, Brooklyn, N. Y. Objective for astronomical telescopes, &c.	Aug. 7, 1877	20	7	12	237
198,607	Same.....Stage for microscopes	Dec. 25, 1877	928	283	12	1105
	Gunn, George P. (*See* Haviland & Gunn.)					
	Gunn, James G. (*See* Watson, Cornelius, assignor.)					
195,503	Gunn, Nelson B. and T., Ellwood, Ind. Fence	Sept. 25, 1877	782	230	12	534
	Gunn, Timothy. (*See* Gunn, Nelson B. and T.)					
186,724	Gunnell, William H., Washington, D. C. Street-sweeper	Jan. 30, 1877	922	286	11	167
195,121	Gunner, Charles, Yonkers, N. Y. Fuel-box	Sept. 11, 1877	381	114	12	461
191,582	Gunsalus, Thomas, West Troy, N. Y. Wash-boiler	June 5, 1877	66	20	11	986
187,269	Gurley, George B., New York, N. Y. Clasp for suspenders	Feb. 13, 1877	350	111	11	262
193,651	Same.....Suspenders	July 31, 1877	1161	347	12	204
190,850	Gusman, Lewis B., Upper Dublin, assignor of one-half interest to C. E. Burke, Philadelphia, Pa. Manufacture of hinges	May 15, 1877	760	226	11	862
195,504	Gustafson, Charles A., assignor to A. S. Hallidie, San Francisco, Cal. Gripping device for traction-cables for propelling cars and vehicles	Sept. 25, 1877	782	231	12	534
7,898	Gustin, Andrew J., Saint Albans, Vt. Apparatus for carrying railway-rails. (Reissue)	Oct. 2, 1877	182	52	12	587
190,211	Same.....same	May 1, 1877	98	28	11	759
190,212	Same.....Carrier-rolls for railway-rails	May 1, 1877	99	28	11	759
	Guth, Henry. (*See* Bersch, Josef, assignor.)					
193,507	Guthrie, Alexander I., Louisville, Ky. Mash-rake	July 24, 1877	988	299	12	170
192,578	Guthrie, James T., Leesburg, Ohio. Fly-trap	July 3, 1877	24	7	12	13
	Guthrie, John B., *et al.* (*See* Toothill, Benjamin S., assignor.)					
144,146	Guthrie, Thomas D., jr., Galva, Ill. Cultivator	Aug. 14, 1877	384	114	12	292
192,758	Guthrie, Wardell, assignor of one-half interest to E. O. Lamphere, Chicago, Ill. Fire-escape	July 3, 1877	199	57	12	49
197,356	Guthrie, Wardell, Chicago, Ill. Ice-slide	Nov. 20, 1877	661	196	12	873
	Guthrie, William, *et al.* (*See* Toothill, Benjamin S., assignor.)					
198,292	Guthrie, William, Galva, Ill. Jack-screw	Dec. 18, 1877	618	187	12	1050
187,847	Gutmann, Simeon, New York, N. Y. Sample-card	Feb. 27, 1877	951	295	11	357
	Gutta-Percha Rubber Manufacturing Company. (*See* Murphy, John, assignor.)					
	Guttridge, David C. (*See* Nellis & Guttridge.)					
198,293	Gutzkow, Frederick, San Francisco, Cal. Manufacture of soda from its sulphate	Dec. 18, 1877	619		12	1050
191,671	Guy, John T., Ottawa, Ohio. Gate	June 5, 1877	152	47	11	996
196,084	Guyer, Hugh, assignor of two-thirds interest to S. Baker, Albany, and J. H. Reynolds, Troy, N. Y. Pipe-coupling	Oct. 16, 1877	419	121	12	636
195,122	Guyer, Richard H., La Fayette, Ind. Vehicle-seat spring	Sept. 11, 1877	381	115	12	461
192,502	Guzeman, William A., assignor to M. C. Parker and Z. E. P. Guzeman, Washington, Iowa. Windmill	June 26, 1877	1034	311	11	1141
	Guzeman, Z. Estelline P., *et al.* (*See* Guzeman, William A., assignor.)					
198,105	Gwathney, Richard R., Louisville, Ky. Cotton separator and cleaner	Dec. 11, 1877	401	{125 126}	12	1013
	Gwinnell, John M. (*See* Huber, Jacob, assignor.)					
198,608	Gwinnell, John M., Newark, N. J. Harness-saddle.)	Dec. 25, 1877	929	283	12	1105
198,609	Gwinnell, John M., assignor of one-half interest to J. Huber, Newark, N. J. Gig-saddle	Dec. 25, 1877	930	283	12	1105
191,957	Haas, Charles A., Delmar, Iowa. Check-rein	June 12, 1877	438	135	11	1039
196,009	Haas, Jerome, and J. Manning, Stockton, Cal. Well-boring apparatus	Oct. 9, 1877	331	94	12	616
188,126	Haas, Philip M., assignor of one-fourth interest to L. Noid, Youngstown, Ohio. Machine for making balusters	Mar. 6, 1877	157	48	11	401

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
189,729	Habermehl, John, Allegheny, Pa. Pattern for metallic casting composition	Apr. 17, 1877	734		11	670
	Haberstro, John F., *et al.* (*See* Josef, Philip P., assignor.)					
195,004	Hackenberg, Julius, New York, assignor to self and C. H. Graef, Edgewater, N. Y. Bracelet	Sept. 11, 1877	257	78	12	443
188,622	Hacker, Joseph, Waterloo, Iowa. Stove-drum	Mar. 20, 1877	660	204	11	485
186,422	Hackett, Almerin, and J. H. Coats, Sparta, Wis. Bather's appliance	Jan. 23, 1877	634	193	11	119
193,159	Hackett, John E., Caledonia, Miss. Machine for pressing hay, &c., for fuel	July 17, 1877	621	189	12	113
	Hacking, John G. (*See* Rice, Henry C., assignor.)					
	Hackman, Amandes. (*See* Tinsley & Hackman.)					
190,679	Hackman, Henry, jr., Lancaster County, Pa. Screw-gearing	May 15, 1877	604	179	11	840
	Hadenfeld, Ernst. (*See* Iffland, Daniel, assignor.)					
192,865	Hadley, Clarence V., East Cambridge, Mass. Knife-scourer	July 10, 1877	334	98	12	65
	Hadlock, James W. (*See* Leavitt, William D., assignor.)					
188,892	Hachnel, Frederic, assignor of one-half interest to H. Norman, New Orleans, La. Cigar-wrapper cutter	Mar. 27, 1877	950	290	11	533
188,893	Same.....Cigar-machine	Mar. 27, 1877	951	290	11	533
191,583	Haering, Henry, New York, N. Y. Valve-motion for steam-engines	June 5, 1877	67	20	11	986
	Haeuser, Edward, administrator. (*See* Morganstern, William.)					
	Haffner, Philip. (*See* Hutton, Robert, assignor.)					
198,381	Hagemann, C. Heinrich, New York, N. Y. Embossing mounted veneers	Dec. 18, 1877	699	213	12	1062
	Hagerstown Agricultural Implement Manufacturing Company. (*See* Hull, Davit F., assignor.)					
	Same.....same.....(Reissue.)					
	Same.....(*See* Miller, Abraham, assignor.)					
7,568	Hagerty, James S., Baltimore, Md. Street-lamp.....(Reissue)	Mar. 27, 1877	1060	326	11	548
189,030	Hagerty, Thomas, Brooklyn, N. Y. Plaiting-machine	Apr. 3, 1877	19	7	11	561
190,318	Haggerty, John, Corry, Pa. Combined slate and book carrier	May 1, 1877	201	60	11	772
	Hagstoz, Thomas B., *et al.* (*See* Quirk, William, assignor.)					
196,446	Hague, James B., Napoleon, Ohio. Horseshoe	Oct. 23, 1877	794	229	12	697
195,213	Hague, Walter E., Pittsburg, Pa. Stand for fire-irons	Sept. 18, 1877	487	144	12	484
194,348	Hahn, John, Spades, Ind. Vehicle-brake lock	Aug. 21, 1877	595	178	12	327
191,139	Hahn, Michael, and G. Mayers, Saint Louis, Mo. Nut-lock	May 22, 1877	1062	318	11	909
	Haick, Edwin. (*See* Peck, Isaac D., assignor.)					
190,319	Haigh, J. Lloyd, New York, N. Y. Straightening and coating wire	May 1, 1877	202	60	11	772
196,085	Haigh, Samuel, Cincinnati, Ohio. Guide-roller for wire-rope tramways, elevators, &c.	Oct. 16, 1877	420	122	12	636
187,271	Haight, David M., Oswego, Ill. Stand or reel for ropes or cordage, &c	Feb. 13, 1877	353	112	11	262
197,931	Same.....Flower and merchandise stand	Dec. 11, 1877	232	71	12	988
198,294	Haight, Joseph, Port Chester, N. Y. Dinner-pail and lantern	Dec. 18, 1877	620	187	12	1050
7,724	Haiman, Elias, Columbus, Ga. Plow.....(Reissue)	June 5, 1877	224	70	11	1007
	Haines, D., *et al.* (*See* Phillips, Daniel, assignor.)					
	Haines, I., *et al.* (*See* Phillips, Daniel, assignor.)					
192,759	Haines, John W., Cambridge, Mass. Attaching glass knobs to metal sockets	July 3, 1877	200	57	12	40
196,447	Same.....same	Oct. 23, 1877	795	229	12	697
188,623	Haines, Lewis H., assignor, by mesne assignments, to self, W. A. McKillip, and Taylor Manufacturing Company. Westminster, Md. Time-lock	Mar. 20, 1877	661	204	11	485
194,902	Hainque, Martial, assignor to self and A. J. Tait, San Francisco, Cal. Rotary printing-press	Sept. 4, 1877	145	45	12	420
	Hains, J. Charles. (*See* Seyl, Peter, assignor.)					
187,756	Hainsworth, William, assignor to self, H. W. Patterson, and J. Irwin, Pittsburg, Pa. Apparatus for utilizing gas as a fuel	Feb. 27, 1877	855	266	11	344
190,213	Haise, Charles and F., Atlanta, Ill. Railway-signal	May 1, 1877	100	29	11	759
	Haise, Frank. (*See* Haise, Charles and F.)					
194,673	Haisten, Henry D., Cuthbert, Ga. Thill-coupling	Aug. 28, 1877	908	271	12	380
	Hake, Ph. (*See* Marston, Thomas P., assignor.)					
	Hale & Co., Alfred. (*See* Bullard, Isaac, assignor.)					
	Hale & Kilburn Manufacturing Company. (*See* Lee, James, assignor).....(Reissue.)					
	Same.....(*See* Stevens, Ashor B., assignor.)					
	Same.....samo.....(Reissue.)					
190,581	Hale, Chesley I., assignor of one-half interest to D. N. Ashmore, Bethany, Ill. Rotary churn	May 8, 1877	480	143	11	817
187,848	Hale, David, Boston, Mass. Base-ball	Feb. 27, 1877	952	295	11	357
192,648	Hale, Ezra M., assignor to J. Talley, jr., Kansas City, Mo. Turbine wheel	July 3, 1877	98	28	12	25
	Hale, Henry. (*See* Hale, Thomas and H.)					
197,122	Hale, Henry S., Philadelphia, Pa. Combined desk and crib	Nov. 13, 1877	411	121	12	827
	Hale, Parker H., *et al.* (*See* Farnham, Asa M., assignor.)					
188,127	Hale, Robert, Minneapolis, Minn. Car-stool	Mar. 6, 1877	159	49	11	401
194,675	Samo.....Machine for bending metal bars	Aug. 28, 1877	909	271	12	380
197,268	Same.....Gas-burner	Nov. 20, 1877	570	168	12	859
197,357	Same.....Machine for bending, cutting, and punching metal bars	Nov. 20, 1877	661	{197 198}	12	873
197,849	Same.....Letter-box	Dec. 4, 1877	141	43	12	966
192,760	Hale, Thomas and H., Wales, N. Y. Jar-holder	July 3, 1877	201	57	12	40
197,123	Haley, John, New Brighton, Pa. Die for welding chain-links	Nov. 13, 1877	411	121	12	827
	Haley, John J., *et al.* (*See* Stewart, Alexander W., assignor.)					
196,353	Hall, Aaron, jr., Saint Johnsville, N. Y. Lathe for clothes-pins	Oct. 23, 1877	710	204	12	685
187,005	Hall, Albert E., Providence, R. I. Dredging-bucket	Feb. 6, 1877	88	30	11	214
	Hall, Alfred B. (*See* Creighton, James R., assignor.)					
197,549	Hall, Allen F., Onarga, Ill. Corn-planter	Nov. 27, 1877	876	260	12	912
	Hall, Alvin O. (*See* Smith, George C., assignor.)					
197,548	Hall, Benjamin, Norwich, Conn. Wool-rinsing machine	Nov. 27, 1877	875	260	12	912
196,964	Hall, Cassius L., Ypsilanti, Mich. Coffee and pea-nut roaster	Nov. 6, 1877	233	70	12	792
192,503	Hall, Chancey, Macomb County, assignor of one-half interest to D. Woodin, Romeo, Mich. Car-coupling	June 26, 1877	1037	312	11	1141
187,622	Hall, Chancey M., assignor of one-half interest to Bay City Iron Company, Bay City, Mich. Set-work for circular-saw mills	Feb. 20, 1877	709	220	11	316
193,369	Hall, Charles C., assignor of one-half interest to E. C. Bates, Boston, Mass. Wash-stand	July 24, 1877	859	263	12	152
187,375	Hall, Charles E., Leeds, England. Stone and ore crusher	Feb. 13, 1877	457	141	11	276
190,580	Hall, Charles F., West Troy, N. Y. Flower-stand	May 8, 1877	479	143	11	817
190,754	Hall, Charles H., Brooklyn, assignor to self and F. P. Tarbell, New York, N. Y. Lozenge-machine	May 15, 1877	679	201	11	850
187,225	Hall, Charles M., Philadelphia, Pa. Mining-machine	Feb. 13, 1877	307	160	11	256
194,674	Hall, Charles W., New York, N. Y. Introducing purifying agents into iron	Aug. 28, 1877	908		12	380
195,214	Hall, David E., assignor to self and J. C. Compton, Cleveland, Ohio. Wash-board	Sept. 18, 1877	487	144	12	485

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Hall, E. B., *et al.* (*See* Milne, Robert D., assignor.)					
198,016	Hall, Edward G., Healdsburg, Cal. Ore-roasting furnace	Dec. 11, 1877	315	97	12	1001
	Hall, Edward K. (*See* Jennisen, Charles R., assignor.)					
	Hall, Elton & Co. (*See* Bassett, H. Williams, assignor.)					
194,963	Hall, Frank C., Newton, Iowa. Iron fence-post	Sept. 11, 1877	218	68	12	438
189,213	Hall, Frank E., and C. W. Richardson, Portland, Me. Rein-holder	Apr. 3, 1877	179	61	11	283
189,631	Hall, George L., Boston, Mass., assignor to Narragansett Horse Nail Company. Hartford, Conn. Horseshoe-nail	Apr. 3, 1877	21	7	11	561
195,269	Hall, George W., and A. F. Pfaffle, Watkins, Iowa. Vehicle-axle lubricator	Sept. 18, 1877	547	159	12	492
193,330	Hall, Henry B., and E. Hine, New York, N. Y. Process and apparatus for putting up caustic alkali	July 24, 1877	820	251, 252	12	147
197,776	Hall, Henry H., assignor to J. O. Hall, Brooklyn, N. Y. Temporary binder, for letters, papers, &c.	Dec. 4, 1877	73	23	12	956
	Hall, Henry J. (*See* Hall, William F. and H. J.)					
	Hall, Hiland S. (*See* Larkin, Albert, assignor.)					
	Hall, H. S. (*See* Enos, Levi S., assignor.)					
193,160	Hall, Isaac N., Garden Grove, Iowa. Mower	July 17, 1877	622	189	12	113
187,131	Hall, James F., and E. P. Cook, Havana, N. Y. Vise	Feb. 6, 1877	203	66	11	230
7,614	Hall, John, Watertown, Mass. Toy money-box	Apr. 17, 1877	845	260	11	685
7,904	Same.....same	Oct. 9, 1877	389	112	12	624
189,857	Same.....same	Apr. 24, 1877	884	270	11	698
194,518	Hall, John, Boston, Mass. Tea and coffee pot	Aug. 28, 1877	773	229	12	360
	Hall, John C. (*See* Kibbey & Hall.)					
	Hall, John O. (*See* Hall, Henry H., assignor.)					
187,006	Hall, John S., Monterey, Cal. Overseaming sewing-machine	Feb. 6, 1877	89	30	11	214
196,660	Hall, John S., San Francisco, Cal. Shoe-fastening	Oct. 30, 1877	1029	299	12	741
191,423	Hall, Jonathan, Keene, N. H. Snap-hook	May 29, 1877	1333	404	11	955
196,086	Hall, Joseph R., Oxford, Ind. Fence-support	Oct. 16, 1877	421	122	12	636
	Hall, Joshua E., *et al.* (*See* North, William C., assignor.)					
	Hall, La Forest W. (*See* Holmes, Hiram C., assignor.)					
186,129	Hall, Leonard H., Erie, Pa. Balance slide-valve	Jan. 9, 1877	314	96	11	58
188,048	Same.....Device for lining engine-shafts	Mar. 6, 1877	92	27	11	393
190,851	Same.....Steam-engine	May 15, 1877	761	226	11	862
7,941	Hall, Lowell, assignor, by mesne assignments, to Hall Manufacturing Company, Grand Rapids, Mich. Railway-track	Nov. 6, 1877	241	72	12	794
	Hall Manufacturing Company. (*See* Hall, Lowell, assignor)	(Reissue.)				
188,797	Hall, Oren D., Freeport, Ill. Sulky-plow	Mar. 27, 1877	858	261	11	519
	Hall Railway-Signal Company. (*See* Hall, Thomas S., assignor.)					
191,958	Hall, Thomas S., and G. H. Snow, West Meriden, Conn., assignor to Hall Railway Signal Company. Electro-magnetic railway-switch signal	June 12, 1877	438	135, 136	11	1039
7,587	Hall, Valentine T., deceased, J. H. Morris, executor and assignor to H. C. Meyer & Co., New York, N. Y. Locking case for stop-cocks	Apr. 3, 1877	275	89	11	594
7,598	Same..... Locking device for stop-cocks	Apr. 10, 1877	538	168	11	337
195,270	Hall, William F. and H. J., Boston, Mass. Reversible latch	Sept. 18, 1877	548	159	12	493
	Hall, William H. (*See* Doll, Frederick, assignor.)					
187,374	Hall, William S., Quincy, Mass. Carpet-sweeper	Feb. 13, 1877	455	143	11	276
190,430	Halladay, Daniel, Batavia, Ill. Windmill	May 8, 1877	333	98	11	798
193,115	Hallas, Charles G., F. W. Flower, and E. Pearson, Sheffield, England. Manufacture of blanks for cutlery	July 17, 1877	586	177	12	107
187,007	Hallas, James G., assignor to Benedict & Burnham Manufacturing Company, Waterbury, Conn. Machine for threading lamp-collars	Feb. 6, 1877	91	31	11	214
189,542	Hallas, James G., and W. N. Weeden, assignors to Benedict & Burnham Manufacturing Company, Waterbury, Conn. Lamp-burner	Apr. 10, 1877	532	166	11	636
197,359	Hallas, James G., and J. N. Webb, Waterbury, Conn. Chuck for metal lathes	Nov. 20, 1877	664	198	12	878
197,216	Haller, Charles M., Philadelphia, Pa. Boot and shoe polishing-machine	Nov. 20, 1877	522	154	12	851
191,584	Hallett, Hervey H., Rockland Mass. Work-trimmer for sewing-machines	June 5, 1877	68	21	11	986
	Hallidie, Andrew S. (*See* Gustafson, Charles A., assignor.)					
7,607	Halladie, Andrew S., San Francisco, Cal. Griping attachment for ropeways. (Reissue)	Apr. 17, 1877	833	258	11	683
195,505	Same.....Endless rope traction-railway	Sept. 25, 1877	764	231	12	534
195,709	Hallock, John K., Erie, Pa. Machine for making lamp-black	Oct. 2, 1877	18	5	12	563
186,674	Hallowell, Albert, Lowell, Mass. Loom-shuttle	Jan. 30, 1877	877	271	11	161
	Halm, Michael, *et al.* (*See* Meeker, De Witt C., assignor.)					
	Halsey, Abraham. (*See* Green & Halsey.)					
187,008	Halsted, Ezekiel S., Brooklyn, N. Y. Bag for enveloping beef-quarters, &c	Feb. 6, 1877	92	31	11	214
189,096	Halsted, William, Trenton, N. J. Device for supplying air to furnaces	Apr. 3, 1877	73	27	11	569
196,294	Same.....Track-clearer	Oct. 23, 1877	651	188, 189	12	677
190,431	Halstrick, Joseph, jr., Boston, Mass. Gas-burner	May 8, 1877	335	98	11	798
191,850	Halter, David R., Lee's Cross Roads, Pa. Car-coupling	June 12, 1877	334	103	11	1026
188,130	Ham, Charles S., assignor to Buffalo Steam Gauge and Lantern Company, Rochester, N. Y. Locomotive head-light	Mar. 6, 1877	161	50	11	402
	Ham, Charles T., *et al.* (*See* French, Bridget, assignor.)					
197,932	Ham, Charles T., Rochester, N. Y. Locomotive head-light	Dec. 11, 1877	233	71	12	988
	Ham, Herbert H. (*See* Cummings, Amos, assignor.)					
198,017	Hamaker, John, White Cloud, Iowa. Sulky-plow	Dec. 11, 1877	316	97	12	1001
187,623	Hambleton, Francis H., Baltimore, Md. Measuring-faucet	Feb. 20, 1877	710	220	11	316
191,235	Hamblin, Stephen M., Mattapoisett, assignor of one-half interest to G. F. Tucker, New Bedford, Mass. Whiffletree-fastening	May 29, 1877	1173	351	11	933
196,088	Hambruch, Gustav, Berlin, Germany. Steam and vacuum pump	Oct. 16, 1877	423	123	12	636
7,842	Hamburger, Ephraim, Detroit, Mich., assignor to E. L. Hutchinson, Auburn, N. Y. Ticket-box	(Reissue.) Aug. 14, 1877	519	157	12	309
190,320	Hamer, Nathaniel, Hooversville, Pa. Feed-regulating device for millstones	May 1, 1877	203	60, 61	11	773
	Hamill, James M. (*See* Durning, Joseph S., assignor.)					
192,914	Hamilton, Benjamin R., South Deerfield, Mass. Spool-case	July 10, 1877	378	112	12	72
196,295	Hamilton, Ezra M., Los Angeles, Cal. Mold for making pipes from mortar	Oct. 23, 1877	653	189	12	677
196,893	Hamilton, Frank, Washington, D. C. Hanging circular-saws	Nov. 6, 1877	163	48	12	783
192,504	Hamilton, Fred. C., Brooklyn, assignor, by mesne assignments, to New York Cording and Sealing Company, New York, N. Y. Metallic seal	June 26, 1877	1038	312	11	1141
	Hamilton, Frederick R., *et al.* (*See* Hamilton, Robert J., assignor.)					
196,224	Hamilton, George, Meadville, Pa. Permutation-padlock	Oct. 16, 1877	564	163	12	636
	Hamilton, G. W. (*See* Hughson, Jacob D., assignor.)					
	Hamilton, Henry H. (*See* Smoot & Hamilton.)					
190,775	Hamilton, Henry N., White Plains, N. Y. Fountain-pen	May 15, 1877	680	202	11	859

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
193,946	Hamilton, Homer, assignor of one-half interest to W. L. Buechner, Youngstown, Ohio. Cotton-bale tie	Aug. 7, 1877	146	44	12	254
192,692	Hamilton, James, Salmon Falls, N. H. Spindle for loom-shuttles	July 3, 1877	144	40	12	32
189,455	Hamilton, James T., Brooklyn, N. Y. Wiper for fire-arms	Apr. 10, 1877	445	140	11	624
186,929	Hamilton, John, Pittsburg, Pa. Kitchen utensil	Feb. 6, 1877	9	3	11	204
193,116	Same.....Wash-bas'n	July 19, 1877	588	177	12	103
196,087	Hamilton, Joseph, Battersea, and F. Frasi, Woolwich, England. Stone-planing machine	Oct. 16, 1877	421	122	12	636
186,726	Hamilton, Lewis, Pendleton, Oreg. Veterinary surgical instrument	Jan. 30, 1877	924	287	11	167
195,891	Hamilton, Mark J., Saint Louis, Mo. Manufacture of steel	Oct. 9, 1877	208	59	12	599
	Hamilton Milling and Mill Furnishing Company. (*See* Yeaklo, William, assignor.)					
	Hamilton, Oliver M., *et al.* (*See* Buckingham, Joseph P., assignor.)					
	Hamilton, O. M., *et al.* (*See* Denison, George A., assignor.)					
190,031	Hamilton, Robert, Franklin, Ind. Cultivating-harrow	Apr. 24, 1877	1064	323	11	721
187,376	Hamilton, Robert J., assignor of two-thirds interest to F. R. and R. J. Hamilton, jr., Fort Wayne, Ind. Signal-lantern	Feb. 13, 1877	458	144	11	276
188,894	Hamilton, Thomas F., New Haven, Conn. Corset	Mar. 27, 1877	953	291	11	533
191,672	Same.....Corset skirt-supporter	June 5, 1877	154	47	11	997
195,271	Same.....Corset	Sept. 18, 1877	549	159	12	493
196,661	Same.....same	Oct. 30, 1877	1030	299	12	741
195,759	Hamlet, Nathan H., Wabash, Va. Zigzag fence	Oct. 2, 1877	67	20	12	579
189,557	Hamlin, Charles A., assignor to S. H. Ransom & Co., Albany, N. Y. Stove	Apr. 17, 1877	563	175	11	648
	Hamlin, James H. (*See* Thompson, Thomas, assignor.)					
195,710	Hamlin, William S., Buchanan, Mich. Mail-bag catch	Oct. 2, 1877	20	6	12	563
	Hamm, William B. (*See* Tudor, Joseph D., assignor.)					
188,624	Hammell, Nathan C., Brown Township, Ohio. Furrowing out corn-ground	Mar. 20, 1877	662	205	11	485
192,623	Hammelmann, Charles, Buffalo, N. Y. Mechanical movement for operating blowers in forges	July 3, 1877	69	20	12	21
197,514	Hammer, George, Reuttingen, Germany, assignor of one-half interest to W. Rausch, Philadelphia, Pa. Cork-cutting machine	Nov. 27, 1877	837	250	12	907
190,680	Hammer, Gustav F., Cincinnati, Ohio. Automatic cylinder-cock	May 15, 1877	605	179	11	841
8,007	Hammer, Thorvald F., Branford, Conn. Molding-machine (Reissue)	Dec. 25, 1877	1059	322	12	1123
193,508	Same.....Match-plate molding	July 24, 1877	989	299, 300	12	171
	Hammerle, John K. (*See* Sackman, John M., assignor.)					
193,867	Hammerschlag, Siegfried, Jersey City, N. J. Waxing paper	Aug. 7, 1877	65	21	12	243
194,964	Hammett, James P., assignor of one-third interest to E. Harrell, Drake's Creek, Ark. Mechanical movement	Sept. 11, 1877	219	68	12	438
191,959	Hammill, Richard, Chicago, Ill. Lantern	June 12, 1877	441	137	11	1039
196,146	Hammond, Alfred F., Berlin, Ohio. Corn-planter	Oct. 16, 1877	489	142	12	645
	Hammond, George P. (*See* Hammond & Krymer.)					
197,360	Hammond, Isaac W., Concord, N. H. Shingling-bracket	Nov. 20, 1877	665	198	12	873
191,753	Hammond, Joseph C., jr., and T. E. King, Rockville, Conn. Shoe-clasp	June 12, 1877	240	76	11	1014
195,005	Hammond, Richard, Franklin, Pa. Balanced slide-valve	Sept. 11, 1877	257	78, 79	12	443
	Hammond, Thomas L. (*See* Andrus & Hammond.)					
191,149	Hammond, Wesley A. and G. P., and W. Krymer, Brooklyn, N. Y. Bracelet	May 22, 1877	1062	318	11	909
	Hammond, William. (*See* Dit Lepine, Woebert B., assignor.)					
196,662	Hammond, William E., Kensington, assignor to Peck, Stow & Wilcox Company, Southington, Conn. Sash-fastener	Oct. 30, 1877	1030	299	12	741
187,132	Hammontree, Jackson F., Harrisonville, Mo. Sulky-plow	Feb. 6, 1877	204	67	11	230
193,703	Hamner, Will C., Water Valley, Miss. Device for supplying locomotive-tenders with fuel	July 31, 1877	1207	362	12	210
192,432	Hamor, Robert B., Eden, Mo. Door-threshold	June 26, 1877	968	290	11	1132
	Hampson, Thomas. (*See* Brennand & Hampson.)					
186,474	Hampton, Erastus R., Asheville, N. C. Clothes-pounder	Jan. 23, 1877	685	210	11	125
	Hampton, James W. (*See* Comstock & Hampton.)					
	Hampton, J. W. (*See* Johnson, Victor, assignor.)					
186,341	Hance, Archibald, New York, N. Y. Spring bolt or catch for sliding-doors, &c.	Jan. 16, 1877	536	162	11	94
	Hanchett, Orin R. (*See* Selden, Griswold & Hanchett.)					
189,730	Hancock, Edmund L., Cadiz, Ky. Washing-machine	Apr. 17, 1877	736	226	11	670
185,861	Hancock, John T., Boston, Mass. Inspirator	Jan. 2, 1877	45	14	11	14
192,331	Hancock, Robert J., Springfield, Mass. Boiler-furnace grate-bar	June 26, 1877	871	263	11	1120
194,870	Hancock, Warren H., Augusta, Ga. Carriage	Sept. 4, 1877	113	35	12	416
194,087	Hand, Ekins, assignor of one-tenth interest to R. G. Newman, Rochester, N. Y. Hydrant	Aug. 14, 1877	308	91	12	283
188,625	Hand, Thomas R., Philadelphia, Pa. Boiler-tube plug	Mar. 20, 1877	662	205	11	485
198,103	Handy, William, Brooklyn, N. Y. Can-seaming machine	Dec. 11, 1877	402	126	12	1013
187,270	Hanel, Arnold, Berlin, Germany. Deodorizing fumigatory closet	Feb. 13, 1877	351	112	11	262
189,214	Hanersperger, Peter, Homer, Ill. Knife-scourer	Apr. 3, 1877	179	61	11	283
190,716	Same.....Stove-leg	May 15, 1877	647	192	11	845
188,358	Haney, James, Allegheny, Pa. Collar-fastener and neck-tie holder	Mar. 13, 1877	398	124	11	440
190,852	Hanger, James E., Richmond, Va. Baling-press	May 15, 1877	761	226, 227	11	862
192,825	Hangliter, Robert P., assignor of part interest to L. E. F. Toboldt and J. McGuiness, Philadelphia, Pa. Apparatus for carbureting air	July 10, 1877	298	87	12	61
193,704	Hankin, William, Seeleyville, Pa. Handsaw	July 31, 1877	1208	362	12	210
	Hanna, John A. (*See* Musgrave, Shillington & Hanna.)					
	Hanna, Septimus J. (*See* Turley, Marshall, assignor.)					
196,895	Hanna, Thompson, assignor of one-half interest to T. S. Hanna, Pittsburg, Pa. Manufacture of vulcanized fiber	Nov. 6, 1877	165		12	783
198,382	Hanna, Thompson and T. S., Pittsburg, Pa. Manufacture of parchment-paper	Dec. 18, 1877	700		12	1063
196,894	Hanna, Thompson, assignor of one-half interest to T. S. Hanna, Pittsburg, Pa. Manufacture of water-proof vulcanized fiber	Nov. 6, 1877	165		12	783
	Hanna, Thompson S. (*See* Hanna, Thompson, assignor.)					
	Hanna, Thompson S. (*See* Hanna, Thompson and T. S.)					
	Hannenstine, John J. (*See* Burris, John W., assignor.)					
191,673	Hannerty, James, Saint Louis, Mo. Picture-exhibitor	June 5, 1877	154	48	11	997
195,606	Hannig, Frank, Lockhart, Tex. Neck-yoke	Sept. 11, 1877	258	79	12	443
193,604	Hanning, John G., assignor to Pioneer Brass Works, Indianapolis, Ind. Gas-burner	July 31, 1877	1105	331	12	197
191,337	Hannon, Thomas D., Tuscaloosa, Ala. Bale-tie	May 29, 1877	1261	380	11	945
	Hannon, Virgil T. (*See* McKeehan, Charles H., assignor.)					
7,853	Hannum, Henry A., Cazenovia, N. Y. Milk-cooler (Reissue)	Aug. 21, 1877	755	224	12	349
188,359	Hansberry, Thomas K., Padonia, Kans. Machine for exterminating grasshoppers	Mar. 13, 1877	399	125	11	440
192,253	Hansbury, Peter R., Philadelphia, Pa. Pencil-sharpener	June 19, 1877	771	235	11	1095

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Hansell, Biddle R. (*See* Hansell, Walter P., assignor.)					
190,582	Hansell, Walter P., assignor of one-third interest to B. R. Hansell, Pittsburg, Pa. Car-spring	May 8, 1877	481	143	11	817
187,133	Hansen, August, San Francisco, Cal. Sofa-bedstead	Feb. 6, 1877	205	67	11	231
195,506	Same.....same	Sept. 25, 1877	785	231, 232	12	535
	Hansen, Ludwig. (*See* Henriksen, Hans P., assignor.)					
194,676	Hansen, Sophus C. H., Washington, D. C. Sewer-trap	Aug. 28, 1877	910	271	12	380
186,675	Hanson, Asbury J., Calvert, Tex. Bale-tie	Jan. 30, 1877	878	271	11	161
	Hanson, Hendrik. (*See* Johnson & Hanson.)					
189,356	Hanson, Horace F., and F. O. Buzzell, Bangor, Me. Exercising-machine	Apr. 10, 1877	353	113	11	612
	Hanson, James J. (*See* Ashworth & Hanson.)					
191,049	Hanson, Thomas, New York, N. Y. Apparatus for elevating liquids	May 22, 1877	978	290, 291	11	897
	Hanvey Barrel Manufacturing Company. (*See* Hanvey, Thomas, assignor.)					
188,128	Hanvey, Thomas, assignor to Hanvey Barrel Manufacturing Company, Rochester, N. Y. Barrel	Mar. 6, 1877	160	49	11	401
192,988	Haptonstall, John, assignor to self, G. Harlan, and P. C. Rude, Perry, Iowa. Locking-latch	July 10, 1877	445	134	12	81
197,777	Haptonstall, John, and F. B. Preston, assignors of one-third interest to J. A. Gilkison, Adel, Iowa. Churn	Dec. 4, 1877	74	23	12	956
190,321	Haraden, Harvey D., assignor of part interest to A. L. Pease, Harford, Vt., and P. B. Smith, Lebanon, N. H. Tobacco-pipe	May 1, 1877	204	61	11	773
195,760	Harbert, Thomas M., Burlington, Kans. Weed-folding attachment for plows	Oct. 2, 1877	67	20	12	570
7,728	Harcourt, Joseph F., Cincinnati, Ohio. Tackle-block (Reissue)	June 12, 1877	531	163	11	1051
188,129	Harcum, Andrew, assignor to self and P. Kunzler, Pittsburg, Pa. Glass-melting pot	Mar. 6, 1877	161	49	11	402
188,626	Harcum, Andrew, Scott Township, assignor of one-half interest to J. Lindsay & Co., Pittsburg, Pa. Device for crimping lamp-chimneys	Mar. 20, 1877	663	205	11	486
196,663	Harcum, Andrew, Allegheny County, Pa. Ornamenting glassware	Oct. 30, 1877	1031	300	12	741
193,331	Hardee, Charles J., San Francisco, Cal. Wood-working machine	July 24, 1877	822	252	12	147
198,018	Harden, Henry O., Stoutsville, Ohio. Orthographic and numerical frame	Dec. 11, 1877	317	98	12	1001
190,756	Hardenbergh, Fayette, and H. L. Holmes, Providence, R. I. Top-roll support for spinning-machines	May 15, 1877	681	202	11	850
198,295	Hardenbrook, William K., Albia, Iowa. Trace-holder	Dec. 18, 1877	620	188	12	1051
186,342	Harder, Dennis R., Chicago, Ill. Rotary engine	Jan. 16, 1877	537	162, 163	11	91
187,377	Harder, Dennis R., North Chatham, N. Y. Dress-protector for vehicles	Feb. 13, 1877	459	144	11	276
190,432	Harder, Dennis R., Chicago, Ill. Safety-lamp	May 8, 1877	336	98	11	798
197,970	Hardesty, Benjamin F., Washington, La. Ship-carpenter's clamp	Dec. 11, 1877	274	84	12	994
	Hardick, Henry. (*See* Goff & Hardick.)					
189,097	Harding, Ebenezer, Delavan, Minn. Machine for winding hay into rolls for fuel	Apr. 3, 1877	75	27	11	569
186,246	Harding, Edward S., Baltimore, Md. Plaiting-machine	Jan. 16, 1877	431	132	11	81
	Harding, Elijah H. (*See* Thorn, William J., assignor.)					
187,625	Harding, Evans B., Northampton, Mass. Speculum	Feb. 20, 1877	711	221	11	317
	Harding, James S. (*See* Saxe & Harding.)					
	Harding, J. J., *et al.* (*See* Foley, Andrew, assignor.)					
194,818	Harding, John W., Columbus, Tex. Railway-switch	Sept. 4, 1877	65	21	12	409
191,759	Harding, William W., Philadelphia, Pa. Restoring and recovering alkaline wastes	June 12, 1877	241		11	1014
197,850	Same.....Apparatus for digesting and macerating fibers by chemical reagents	Dec. 4, 1877	142	43	12	966
194,147	Hardwick, William, Erie, Pa. Balanced valve	Aug. 14, 1877	384	114	12	292
194,238	Same.....Oscillating valve for steam-engines	Aug. 14, 1877	468	142	12	304
	Hardy, Charles, *et al.* (*See* Graham, Edmund H., assignor.)					
189,731	Hardy, Thomas P., Marion, N. J. Vise	Apr. 17, 1877	737	226	11	670
	Hardy, William H., *et al.* (*See* Maas, Albert W. M., assignor.)					
	Hare, William W. (*See* Davenport & Hicks, assignors.)					
189,623	Hargrave, Richard W., Marshalltown, Iowa. Ironing-board	Apr. 17, 1877	628	194	11	656
186,557	Hargrave, Thomas C., Boston, Mass. Jug, &c.	Jan. 23, 1877	760	233	11	136
7,553	Hargreaves, George, Detroit, Mich., assignor to M. Hargreaves and G. Upton. Match-splint (Reissue)	Mar. 13, 1877	506	157	11	455
	Hargreaves, Mary, *et al.* (*See* Hargreaves, George, assignor) (Reissue.)					
	Harker, Lewis A. (*See* Amann & Harker.)					
	Same.....(*See* Amann, Charles H., assignor) (Reissue.)					
195,007	Harkins, James B., Altoona, Pa. Packing for combining-tubes of injectors for steam-boilers	Sept. 11, 1877	259	79	12	443
	Harkness, Abraham, *et al.* (*See* Cliff, James, assignor.)					
191,851	Harkness, Sumner J., Thorndike, Mass. Stirrup	June 12, 1877	334	104	11	1026
	Harlan, George, *et al.* (*See* Haptonstall, John, assignor.)					
	Harley, George, *et al.* (*See* Pepple, Edmund, assignor.)					
189,934	Harley, George P., Allendale, S. C. Awl	Apr. 24, 1877	961	293	11	708
	Harlow, Charles F. (*See* Corbett & Harlow.)					
192,579	Harlow, Charles F., assignor to J. Kimball, Boston, Mass. Tobacco-cutter	July 3, 1877	24	7	12	15
188,512	Harlow, John B., Saint Louis, Mo. Post-office box	Mar. 20, 1877	564	174	11	471
	Harlow, Robert. (*See* Rowland, Ellis and G. E., assignors.)					
186,247	Harlow, Sylvester E., Fairbury, Ill. Paper dish	Jan. 16, 1877	432	133	11	81
190,137	Harman, Gottleib, Philadelphia, Pa. Carrier for lathe-work	May 1, 1877	23	6	11	749
187,009	Harman, Joseph, Champlain, N. Y. Pump	Feb. 6, 1877	93	31, 32	11	15
	Harmonic Telegraph Company. (*See* Gray, Elisha, assignor.)					
190,583	Harner, Wilson C., Pittsburg, Pa. Nut-lock	May 8, 1877	481	144	11	817
192,256	Harp, William A., assignor of one-half interest to E. Steadman, Covington, Ga. Printing-press	June 19, 1877	770	234	11	1095
192,257	Same.....Treadle mechanism for operating machinery	June 19, 1877	773	235	11	1095
189,732	Harper, Benjamin F., Mount Vernon, Ill. Heater and evaporator for molasses	Apr. 17, 1877	737	226	11	670
	Harper, Henry V. (*See* Vandecar & Harper.)					
	Harper, Hollingsworth & Darby. (*See* Hollingsworth, Loftus, assignor.)					
187,849	Harper, James, Westville, Conn. Lubricator for steam-engines	Feb. 27, 1877	953	296	11	357
191,425	Same.....Lubricators for steam-engines	May 29, 1877	1334	405	11	955
191,424	Harper, James M., El Paso, Ill. Book	May 29, 1877	1333	405	11	955
194,677	Harper, John, Stamford, Conn. Flower-stand	Aug. 28, 1877	911	272	12	380
	Harrell, Elias. (*See* Hammett, James P., assignor.)					
190,032	Harriman, Maggie M., Kansas City, Mo. Corset	Apr. 24, 1877	1065	324	11	721
188,131	Harrington, David, Worcester, Mass. Sliding outrigger for boats	Mar. 6, 1877	163	50	11	402
	Harrington, George. (*See* Edison, Thomas A., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
191,236	Harrington, George, Springfield, Mass. Wooden box	May 29, 1877	1173	352	11	933
186,558	Harrington, George W., Plain View, Minn. Draft-equalizer	Jan. 23, 1877	760	233	11	136
196,799	Harrington, H., Niles, and M. Stoddard, Stockbridge, N. Y. Washing-machine	Nov. 6, 1877	62	19	12	769
191,674	Harrington, Jeremiah A., Boston, Mass. Measuring device for hatters' use	June 5, 1877	155	48	11	997
7,952	Harrington, John, Ryde, Isle of Wight, England, assignor by mesne assignments, to Shawmut Manufacturing Company, Hartford, Conn. Manufacture of artificial leather (Reissue)	Nov. 13, 1877	503		12	840
196,355	Harrington, John, Ryde, Isle of Wight, England. Spring-hinge	Oct. 23, 1877	711	205	12	685
196,356	Same.....Game apparatus	Oct. 23, 1877	712	205	12	685
196,357	Same.....same	Oct. 23, 1877	713	205	12	685
	Harrington, Richard, trustee. (*See* Larrabee, Benjamin, assignor.)					
192,693	Harrington, Samuel H., assignor to self, J. K. Milnor, H. G. Stewart, and H. Taylor, Baltimore, Md. Fire-escape	July 3, 1877	144	40	12	32
	Harris, Arthur. (*See* Clark & Harris.)					
194,519	Harris, Arthur, assignor of one-half interest to G. M. Clark, Chicago, Ill. Soldering-tool	Aug. 28, 1877	774	230	12	360
185,826	Harris, Charles C., Kenawee, Ill. Windmill	Jan. 2, 1877	13	5	11	10
194,678	Harris, Charles T., Mount Summit, Ind. Gate	Aug. 28, 1877	912	272	12	380
193,947	Harris, George, Petaluma, Cal. Drier for fruit and other articles	Aug. 7, 1877	147	45	12	254
191,338	Harris, George W., Sturgis, Mich. Watch-key	May 29, 1877	1261	380	11	945
194,149	Harris, Hart, Petrolia, Pa. Tube-cutter for oil-wells	Aug. 14, 1877	386	114	12	292
191,960	Harris, Hiram S., Versailles, Ky. Harvester-reel	June 12, 1877	443	137	11	1040
	Harris, James L. (*See* French, Ervin D., assignor.)					
186,245	Harris, Jay H., Sacramento, Cal. Chuck for metal-turning lathes	Jan. 16, 1877	431	132	11	81
193,332	Harris, John, Buena Vista, N. Y. Reciprocating churn	July 24, 1877	823	252	12	148
197,124	Harris, Joseph T., Bristol, England. Metallic window-sash	Nov. 13, 1877	412	{121 122}	12	828
	Harris Manufacturing Company. (*See* Strunk, Daniel, assignor.)					
196,448	Harris, Max, Brooklyn, N. Y. Wind-motor for propelling vessels	Oct. 23, 1877	795	229	12	697
	Harris, Nathaniel H. (*See* Marshall, Charles K., assignor.)					
196,225	Harris, Noah, Xenia, Ind. Coffee-roaster	Oct. 16, 1877	565	163	12	656
196,354	Harris, Samuel, Boston, Mass. Combined file and screw-driver	Oct. 23, 1877	711	204	12	685
197,269	Harris, Samuel, jr., East Cambridge, Mass., assignor to J. Greeley and S. Shepherd, Nashua, N. H., and H. L. Hazelton, Boston, Mass. Nailing-machine	Nov. 20, 1877	570	169	12	859
195,272	Harris, Stephen M., Forest Grove, Oreg. Wheel-plow	Sept. 18, 1877	549	160	12	493
	Harris, Thomas. (*See* Dunn & Harris.)					
195,872	Harris, Venendo P., Greensburg, Ind. Oil-reservoir for burners or carbureters	Oct. 2, 1877	180	51	12	587
198,019	Harris, William E., New York, N. Y. Machine for cutting veneers	Dec. 11, 1877	317	98	12	1001
187,226	Harris, William H., Jamestown, N. Y. Wardrobe	Feb. 13, 1877	308	100	11	256
193,868	Harris, William S., Brooklyn, N. Y. Umbrella	Aug. 7, 1877	66	21	12	243
	Harris, W. W., *et al.* (*See* Ellinwood, Augustus E., assignor.)					
	Harrison, Charles. (*See* James, John K., assignor.)					
	Same.....(*See* Dodd, William, assignor.)					
188,897	Harrison, Charles, New York, N. Y. Water-closet basin	Mar. 27, 1877	956	292	11	533
196,010	Harrison, Charles, Southwark, England. Umbrella-runner	Oct. 9, 1877	332	94	12	616
196,798	Harrison, Charles, New York, N. Y. Porcelain bowl for water-closets	Nov. 6, 1877	61	18	12	769
197,629	Same.....Drip-tray for water-closet bowls	Nov. 27, 1877	958	{284 285}	12	924
193,652	Harrison, Edward, New Haven, Conn. Grinding-mill	July 31, 1877	1163	348	12	204
193,653	Same.....same	July 31, 1877	1165	{348 349}	12	204
	Harrison, Harry, *et al.* (*See* Dunn, Harry, assignor.)					
	Harrison, Horace H., *et al.* (*See* Dunn, Harry, assignor.)					
188,895	Harrison, John P., Aberdeen, Miss. Cotton-chopper	Mar. 27, 1877	953	291	11	533
198,610	Harrison, Jonathan W., assignor of one-half interest to J. E. Ingersoll, Adrian, Mich. Coal-mining machine	Dec. 25, 1877	931	{283 284}	12	1105
188,896	Harrison, Margaret, Rock Island, Ill. Dress-chart	Mar. 27, 1877	954	291	11	533
188,050	Harrison, Theophilus, and W. C. Buchanan, Belleville, Ill. Grain-separator	Mar. 6, 1877	93	28	11	393
196,896	Harrison, William, Linneus, Mo. Car-coupling	Nov. 6, 1877	166	48	12	783
188,049	Harrison, William H., Livermore, Cal. Oiler	Mar. 6, 1877	93	27	11	393
195,361	Harrison, William H., New Castle, Pa. Blowing-engine valve	Sept. 18, 1877	626	186	12	504
189,456	Harrold, George W., and L. Satterlee; said Harrold assignor to A. S. Strong, Rochester, N. Y. Ventilator	Apr. 10, 1877	447	140	11	624
187,464	Harry, Paul, Chicago, Ill. Register	Feb. 20, 1877	560	173	11	296
195,362	Harsch, Joseph, Baltimore, Md. Ventilating skylight	Sept. 18, 1877	627	186	12	504
198,296	Harsh, Levi, Golden City, Colo. Envelope	Dec. 18, 1877	621	188	12	1051
198,297	Same.....Scissors and shears	Dec. 18, 1877	621	188	12	1051
186,727	Hart, Albert S., Hoboken, N. J., assignor to A. A. Spaulding, Norfolk, Conn. Washing-machine	Jan. 30, 1877	924	287	11	168
197,778	Hart, Alfred, assignor to self and H. C. Storey, San Marcos, Texas. Wagon-brake	Dec. 4, 1877	75	23	12	956
188,737	Hart, Andrew H., Mount Vernon, N. Y. Barber's apron	Mar. 27, 1877	787	242	11	511
	Hart, Blevin & Mead Manufacturing Company. (*See* Fogelstrand, Otto F., assignor.)					
192,826	Hart, Edward H., New York, N. Y. Hat and bonnet stand	July 10, 1877	299	87	12	61
	Hart, Frederick A. (*See* Cummings, William A., assignor.)					
191,585	Hart, Fredric B., Bristol, R. I. Clearer-roll support for spinning-frames	June 5, 1877	69	21	11	987
197,630	Hart, Henry C., Adrian, Mich. Lamp	Nov. 27, 1877	959	285	12	924
	Hart, James, *et al.* (*See* Redmond, Charles C., assignor.)					
	Hart, John A. (*See* Martin, Francis M., assignor.)					
193,405	Hart, Jonathan T., assignor to Meoro Manufacturing Company, Kensington, Conn. Guide-board	July 24, 1877	891	272	12	157
	Hart, J. V., *et al.* (*See* Milne, Robert D., assignor.)					
	Hart, Roswell, *et al.* (*See* French, Bridget, assignor.)					
	Hart, Roswell. (*See* Peoples, James A., assignor.)					
	Hart, Samuel M. (*See* Maris & Hart.)					
	Same.....(*See* Maris, Thomas C., assignor.)					
	Hart, Thomas, *et al.* (*See* Johnson, John D., assignor.)					
7,909	Hart, William H., jr., Philadelphia, Pa. Neck-tie (Reissue)	Oct. 9, 1877	394	113	12	624
	Hartigan, William R., *et al.* (*See* Murphy, Daniel, assignor.)					
	Hartigan, William R. (*See* Murphy, Daniel H., assignor.)					
190,033	Hartley, Howard, Pittsburg, Pa. Adjustable gun-stock	Apr. 24, 1877	1065	324	11	721
198,612	Hartman, Christian, and F. A. Freese, San Francisco, Cal. Swing	Dec. 25, 1877	934	284	12	1106
187,134	Hartman, Jay J., Cincinnati, Ohio. Mounting photographic pictures	Feb. 6, 1877	206	11	11	231
197,361	Hartman, John, jr., Philadelphia, Pa. Trace-holder	Nov. 20, 1877	666	199	12	874

Alphabetical list of patentees for the year 1877—Continued

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
190,957	Hartman, John M., assignor to Taws & Hartman, Philadelphia, Pa. Automatic relief-valve for steam-cylinders	May 15, 1877	681	202	11	850
	Hartmann, Julius. (*See* Lauer & Hartmann)					
	Same ... same (Reissue.)					
194,428	Hartmann, Julius, assignor of one half interest to A. Lauer, Louisville, Ky. Plow	Aug. 21, 1877	671	200	12	337
198,611	Hartmann, Julius, Louisville, Ky. Swivel-plow	Dec. 25, 1877	933	284	12	1105
192,694	Hartnagel, Fredrick A. and J. W., Saint Louis, Mo. Corn-planter	July 3, 1877	146	41	12	32
	Hartnagel, John W. (*See* Hartnagel, Fredrick A. and J. W.)					
185,999	Hartnoll, John, Mason, N. H., assignor to A. McDonald, Belmont, Mass. Hammer for dressing stone	Jan. 2, 1877	184	57	11	33
194,429	Hartwell, Samuel, Lincoln, Mass. Potato-bug trap	Aug. 21, 1877	672	201	12	337
196,011	Hartzell, Hillery H., Holden, Mo. Neck-yoke	Oct. 9, 1877	333	94	12	616
	Hartzler, John P., *et al.* (*See* Planck, John, assignor.)					
191,961	Harvey, Augustus F., Kirkwood, Mo. Mechanical movement	June 12, 1877	443	137	11	1040
190,853	Harvey, Charles A., Washington, D. C. Car-starter	May 15, 1877	704	227	11	802
195,008	Harvey, Edmund A., Wilmington, Del. Roller-gage for rolling-mills	Sept. 11, 1877	260	79, 80	12	444
7,534	Harvey, Hayward A., New York, N. Y., assignor, by mesne assignments, to American Screw Company. Machine for shaving the heads of wood-screws.. (Reissue)	Feb. 27, 1877	1059	326, 327	11	371
7,573	Harvey, Hayward A., assignor, by mesne assignments, to American Screw Company, Providence, R. I. Machine for threading wood-screws.. (Reissue)	Mar. 27, 1877	1057	328, 329	11	548
7,574	Same.....Machine for nicking the heads of screw-blanks..... (Reissue)..	Mar. 27, 1877	1070	329, 330	11	549
197,466	Harvey, Hayward A., Orange, N. J. Bolt and nut	Nov. 27, 1877	786	235	12	900
197,467	Same.....Nut and bolt lock	Nov. 27, 1877	787	235	12	900
197,933	Same.....Wood screw	Dec. 11, 1877	234	71	12	988
196,449	Harvey, Henry H., Augusta, Me. Bush-hammer	Oct. 23, 1877	797	230	12	698
193,509	Harvey, John, London, England. Preserving food	July 24, 1877	990		12	171
195,273	Harvey, John W., Farley, Iowa. Gate	Sept. 18, 1877	550	160	12	493
197,125	Harvey, Joseph, Aledo, Ill. Dropping attachment for corn-planters	Nov. 13, 1877	414	122	12	823
187,378	Harvey, Lewis C., Jackson, Mich., assignor of one-half interest to J. McArdle, Cleveland, Ohio. Stone-polish	Feb. 13, 1877	460		11	276
193,948	Harvey, Lorenzo D., Sheboygan, assignor to self and E. J. Stewart, Genesee, Wis. Ventilator in the windows of buildings	Aug. 7, 1877	148	45	12	255
189,624	Harvey, Miles M., San Francisco, Cal. Slop-hopper	Feb. 20, 1877	711	220	11	316
	Harvey, William. (*See* Gerald, Ames F., assignor.)					
189,032	Harvey, William P., Baltimore, Md. Lard-cooler	Apr. 3, 1877	22	7	11	561
	Harwood, Charles. (*See* Warrington & Harwood.)					
189,935	Harwood, William A., Brooklyn, N. Y. Talking and crying doll	Apr. 24, 1877	962	294	11	708
189,624	Harworth, James, and W. H. Newell, Philadelphia, Pa.; said Newell assignor to said Harworth. Motor for sewing-machines	Apr. 17, 1877	629	195	11	657
197,126	Hasbrouck, Cyrus L., Syracuse, N. Y. Hinge for awning-blinds	Nov. 13, 1877	415	122	12	828
197,127	Hasbrouck, Eli P., Syracuse, N. Y. Toy	Nov. 13, 1877	416	122	12	828
191,675	Haskin, Henry P., and J. H. Reigart, Beloit, Wis. Cutting apparatus for harvesters..	June 5, 1877	156	48	11	997
195,446	Haskin, Henry P., assignor of one-half interest to R. Tattershall, Beloit, Wis. Post-hole auger	Sept. 25, 1877	722	213	12	526
188,132	Haskins, John F., Philadelphia, Pa. Wire brush	Mar. 6, 1877	164	50	11	402
197,362	Haskins, Ralph, Boston, Mass. Spring-elevator	Nov. 20, 1877	666	199	12	874
	Haslehurst, Theodore E., *et al.* (*See* Randel, William, assignor.)					
194,903	Hass, Cæsar, New York, N. Y. Device for securing legs to furniture	Sept. 4, 1877	145	45	12	420
	Hasselbach, Ernst. (*See* Hasselbach, Ferdinand and E.)					
187,530	Hasselbach, Ferdinand and E., Brooklyn, N. Y. Cigar-box	Feb. 20, 1877	622	193	11	305
187,626	Same.....Cigar-box catch	Feb. 20, 1877	712	221	11	317
	Hasselman, Lewis W. (*See* Suitt, James B., assignor.)					
196,752	Hasslacher, Matthäus, Brooklyn, N. Y. Brick-machine	Nov. 6, 1877	16	5	12	763
	Hassler, Henry, *et al.* (*See* Schwanengel, Charlys W., assignor.)					
	Hassler, John R. (*See* Whaley & Hassler.)					
191,050	Hastings, Catherine, Oswego, N. Y. Fruit-jar	May 22, 1877	980	291	11	898
8,000	Hastings, Glover S., Plainville, Conn. Attaching knives and forks to handles. (Reissue)	Dec. 18, 1877	765	231	12	1073
196,089	Hastings, James L., New York, N. Y. Fire apparatus	Oct. 16, 1877	424	123, 124	12	637
184,010	Hastings, Watson F., Bridgeport, Conn. Stop-motion for spinning and twisting frames	Feb. 6, 1877	93	32	11	215
191,586	Hatch, Anson, New Haven, assignor to self and A. Taplin, Forestville, Conn. Indicator for truing work in lathes	June 5, 1877	70	21	11	987
	Hatch, D. P., *et al.* (*See* Nulin, Robert D., assignor.)					
	Hatch, Isaac A. (*See* Ballou, Hiram P., assignor.)					
193,445	Hatch, Jesse W., Rochester, N. Y., and H. G. Thompson, Milford, Conn. Lasting-mechanism for boots and shoes	July 24, 1877	927	282	12	162
193,446	Hatch, Jesse W., Rochester, N. Y. Lasting-machine for boots and shoes	July 24, 1877	928	282, 283	12	162, 163
195,447	Same.....Shoe	Sept. 25, 1877	723	214	12	526
186,728	Hatfield, Hiram, Ossian, Ind. Bee-hive	Jan. 30, 1877	925	287	11	168
192,505	Hatfield, James F., Lizton, Ind. Grain-separator	June 26, 1877	1039	312	11	1141
190,854	Hatfield, James T., Hoboken, N. J. Ventilating-pillow	May 15, 1877	705	227	11	862
196,090	Hatfield, William H., Cedar Grove, Ga. Harrow	Oct. 16, 1877	427	124	12	637
191,852	Hathaway, Ralph, Memphis, Tenn. Faucet	June 12, 1877	335	104	11	1026
187,227	Hathaway, Richard W., Fairhaven, Mass. Rowlock	Feb. 13, 1877	309	100	11	256
	Hathaway, Snowden K. (*See* McMahan & Craik, assignors.)					
	Same..... (*See* McMahan, George M., assignor.)					
191,237	Hathaway, William A., Wickford, assignor of one-half interest to J. Maglone, Bellcville, R. I. Alarm for carding-machines	May 29, 1877	1174	352	11	933
7,648	Hatheway, Henry H., Clockville, N. Y. Horse hay-rake (Reissue)..	May 1, 1877	296	87	11	785
195,123	Hattery, Jeremiah L., Charlottesville, Va. Apparatus for detaching horses	Sept. 11, 1877	382	115	12	461
191,676	Hatton, Thomas F., and J. F. Record, Avon, Ind. Rotary churn	June 5, 1877	157	48	11	997
190,214	Hatzl, Joseph, Spades, Ind. Sash-fastener	May 1, 1877	101	29	11	759
	Hauck, Alfred B., *et al.* (*See* Andrews, Charles B., assignor.)					
193,760	Hauck, Charles J., Brooklyn, N. Y. Pocket-oiler	July 31, 1877	1260	378	12	218
	Hauck, Samuel, jr. (*See* Andrews, Charles B., assignor.)					
194,089	Hauerwas, Ludwig, Hartford, Conn. Extension-ladder	Aug. 14, 1877	310	91	12	283
191,051	Hauff, Charles, Ashland, Ohio. Harness-tug	May 22, 1877	980	291	11	898
	Haug, John. (*See* Archbold & Haug.)					
192,506	Haumann, August G., Pittsburg, Pa. Shutter	June 26, 1877	1040	312	11	1141
	Haupt, Richard G. M. (*See* Jessop, Samuel N., assignor.)					
187,272	Hauschildt, Henry, New York, N. Y. Bale-hook	Feb. 13, 1877	354	112	11	262

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
185,918	Hanschildt, John D., Chicago, Ill. Sofa-bed	Jan. 2, 1877	109	33	11	22
	Hauxhurst, George W. (*See* Gladding & Hauxhurst.)					
7,778	Havell, George, Newark, N. J. Book, shawl, or parcel handle (Reissue)	July 3, 1877	267	78	12	48
188,627	Havell, George, Newark, N. J, assignor to W. Demuth & Co., New York, N. Y. Tobacco-pipe cover	Mar. 20, 1877	664	205	11	486
194,904	Havell, George, Newark, N. J. Watch-key	Sept. 4, 1877	146	46	12	420
196,226	Same. Corkscrew	Oct. 16, 1877	566	164	12	656
196,664	Same. Dress-elevator	Oct. 30, 1877	1032	300	12	741
192,989	Havens, Frederick A., assignor of one-half interest to S. A. Castle, Wethersfield, Conn. Wagon-end-gate catch	July 10, 1877	446	134	12	81
187,135	Haviland, Benjamin, and G. P. Gunn, Ilion, N. Y. Lock for pistols, &c	Feb. 6, 1877	207	67	11	231
	Hawes, Mather E. (*See* Roberts, Andrew J., assignor.)					
	Hawk, John J. (*See* Lightfoot & Hawk.)					
196,091	Hawkens, Alexander, and G. H. Wetzel, Lancaster, Ohio. Wagon-tongue and double-tree	Oct. 16, 1877	428	124	12	637
195,601	Hawkes, Ezra, Boston, Mass. Chimney-cap	Sept. 25, 1877	870	259	12	547
197,270	Hawkes, Timothy, and T. F. Watson, Jersey City, N. J. Step and turnstile register for cars, &c	Nov. 20, 1877	572	169	12	859
187,627	Hawkins, Horace R., Akron, Ohio. Horse hay-rake	Feb. 20, 1877	713	221	11	317
	Hawkins, John R. (*See* Colvin, Orson, assignor.)					
188,798	Hawkins, John W., Akron, Ohio. Steam-packing for steam engines and pumps	Mar. 27, 1877	859	261	11	520
193,333	Hawkins, William, San Francisco, Cal. Hoisting apparatus	July 24, 1877	824	252	12	148
196,800	Same. Machine for forming insertible saw-teeth	Nov. 6, 1877	63	19	12	769
	Hawkinson, Swen A. (*See* Blomgren & Hawkinson.)					
196,450	Hawley, Charles H., assignor to L. Bailey, Hartford, Conn. Bench-plane	Oct. 23, 1877	797	230	12	698
194,430	Hawley, Edward D., Salem, Ohio. Grate-fender	Aug. 21, 1877	672	201	12	337
187,850	Hawley, James M., Odin, Ill. Corn-sheller	Feb. 27, 1877	954	296	11	357
186,206	Hawley, John S., Stapleton, N. Y. Vent-clearer for wash-bowls, &c	Jan. 16, 1877	398	121	11	77
	Hawley, Richard, jr. (*See* Crompton, Nicol & Hawley.)					
	Hawley, Robert B. (*See* Colby, Charles T., assignor.)					
	Haworth, George. (*See* Ellis, Frederick R., assignor.)					
	Haworth, George D. (*See* Haworth, Lysander L. and G. D.)					
	Haworth, George D., *et al.* (*See* Hubbard, William W., assignor) (Reissue.)					
191,528	Haworth, George D., Decatur, Ill. Check-row attachments to seed-planters	June 5, 1877	18	6	11	979
196,012	Same. Check-row attachment for corn-planters	Oct. 9, 1877	333	95	12	616
197,550	Same. Pulley for check-row cords	Nov. 27, 1877	877	261	12	913
197,551	Same. Corn-planter	Nov. 27, 1877	878	261	12	913
	Haworth, James N. (*See* Kerr, Christopher C., assignor.)					
	Haworth, James W., *et al.* (*See* Hubbard, William W., assignor) (Reissue.)					
196,296	Haworth, John, Dover, N. H. Tension-regulator for calico-printing machines	Oct. 23, 1877	653	189	12	677
	Haworth, Lysander L., *et al.* (*See* Hubbard, William W., assignor) (Reissue.)					
197,271	Haworth, Lysander L., Decatur, Ill. Check-row planter	Nov. 20, 1877	574	170	12	859
197,272	Haworth, Lysander L. and G. D., Decatur, Ill. Hand check-row planter	Nov. 20, 1877	575	170	12	859
	Haworth, Mahlon, *et al.* (*See* Hubbard, William W., assignor) (Reissue.)					
188,898	Haws, Andrew J., Johnstown, Pa. Bessemer-converter bottom	Mar. 27, 1877	956	292	11	533
188,899	Same. same	Mar. 27, 1877	957	292	11	534
188,900	Same. same	Mar. 27, 1877	957	292	11	534
193,245	Haws, John L., Johnstown, Pa. Brick-machine	July 17, 1877	714	218	12	125
193,949	Haws, William H., Johnstown, Pa. Bessemer-converter bottom	Aug. 7, 1877	148	45, 46	12	255
196,753	Hawthorne, Henry H., Philadelphia, Pa. Roundabout	Nov. 6, 1877	18	5	12	763
194,905	Hawver, Amenzo, Union, N. Y. Leather-scrubbing cylinder	Sept. 4, 1877	147	46	12	421
194,906	Same. Leather-rolling machine	Sept. 4, 1877	147	46	12	421
	Hax, Louis. (*See* Michelson & Hax.)					
	Hay & Co. (*See* Woodward, Theodore F., assignor.)					
193,605	Hay, Bushrod C., Washington, D. C., assignor, by mesne assignments, of one-half interest to G. A. Bassett, trustee, Jamestown, N. Y. Ball check-valve for sewers	July 31, 1877	1106	332	12	197
	Hay, George. (*See* Park & Hay.)					
189,457	Hay, Lamar T., Xenia, Ohio. Car-brake	Apr. 10, 1877	448	141	11	625
	Hay, Samuel F. (*See* Goodchild & Hay.)					
7,740	Hayden, Charles H., Columbus, Ohio. Fire-kindler (Reissue)	June 12, 1877	545	166, 167	11	1053
189,310	Same. same	Apr. 10, 1877	310	98	11	607
	Hayden, Henry C. (*See* Cragin, James T., assignor.)					
196,897	Hayden, Henry F., Washington, D. C. Device for feeding air to boiler-furnaces	Nov. 6, 1877	167	49	12	783
198,613	Same. Device for supplying air to furnaces	Dec. 25, 1877	934	284, 285, 286	12	1106
189,034	Hayden, James, Philadelphia, Pa. Car-coupling	Apr. 3, 1877	23	8	11	562
187,379	Hayden, John J., Indianapolis, Ind., assignor of one-half interest to C. P. Benedict, Washington, D. C. Envelope	Feb. 13, 1877	461	145	11	276
194,819	Hayden, Osmon M., and G. A. Knowles, La Porte City, Iowa. Stock-feeder	Sept. 4, 1877	66	21	12	409
186,835	Hayden, Peter, New York, N. Y. Bale-tie	Jan. 30, 1877	1039	321	11	182
186,836	Hayden, Peter, New York, N. Y., and W. B. Hayden, Columbus, Ohio. Piling Bessemer-steel scrap	Jan. 30, 1877	1040	321	11	182
194,774	Hayden, Randolph, Middletown, Conn. Shutter-fastener	Sept. 4, 1877	20	5	12	403
	Hayden, Thomas S., *et al.* (*See* Mallett, Francis W., assignor.)					
	Hayden, William B. (*See* Haydon, Peter and W. B.)					
7,471	Hayden, William B., Columbus, Ohio. Bale-tie (Reissue)	Jan. 23, 1877	856	264	11	149
191,339	Same. Splicing fence and telegraph wires	May 29, 1877	1262	381	11	945
188,051	Hayek, Francis, New York, N. Y. Card-rack	Mar. 6, 1877	94	28	11	393
194,148	Hayes, Albert, Petaluma, Cal. Whiffletree	Aug. 14, 1877	385	114	12	292
198,614	Hayes, Clark P., Brooklyn, N. Y. Machine for cutting and grinding logwood	Dec. 25, 1877	937	286	12	1106
198,107	Hayes, George, New York, N. Y. Ventilator	Dec. 11, 1877	404	126	12	1013
	Hayes, George W. (*See* Sammis & Hayes.)					
	Hayes, George W., *et al.* (*See* Vanwormer, William H., assignor.)					
189,357	Hayes, George W., assignor to J. B. Sammis, New York, N. Y. Elastic hub	Apr. 10, 1877	354	113, 114	11	612
192,990	Hayes, Henry B., Woburn, Mass. Water-meter	July 10, 1877	447	134	12	82
189,098	Hayes, Richard A., Elgin, Ill. Electro-magnetic boiler-feed regulator	Apr. 3, 1877	76	27, 28	11	569
198,541	Hayes, Samuel J., Grand Ridge, Ill. Road-scraper	Dec. 25, 1877	867	264	12	1096
195,274	Hayes, William H., Salisbury, Mo. Cattle-watering device	Sept. 18, 1877	551	160	12	493
194,773	Hayford, Ira Boston, Mass. Apparatus and process for preserving wood	Sept. 4, 1877	17	5	12	403

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
191,340	Haylock, William H., assignor to self and J. Higgins, Jonesville, N. Y. Sad-iron heater	May 29, 1877	1263	381	11	945
198,298	Haylock, William H., and A. Benedict, assignors to selves and J. Higgins, Jonesville, N. Y. Wagon-spring	Dec. 18, 1877	622	188	12	1051
193,246	Haynes, Edgar K., Boston, Mass. Match-safe	July 17, 1877	714	219	12	125
197,217	Same.....Lantern	Nov. 20, 1877	523	154	12	852
198,108	Same.....Clasp	Dec. 11, 1877	404	126	12	1013
186,729	Haynes, Eldridge, Kirk's Cross-Roads, Ind. School-desk seat	Jan. 30, 1877	927	287	11	168
	Haynes, George M., *et al.* (*See* Nix, John D., assignor.)					
	Haynes, Warren H. (*See* Edson & Haynes.)					
194,239	Haynes, Warren H., North Sudbury, Mass. Car-axle	Aug. 14, 1877	469	142	12	304
	Hays, David. (*See* Griswold, Lee, assignor.)					
	Same..... (*See* Stewart, Charles H., assignor.)					
197,273	Hays, Edward, Rochester, N. Y. Steam air-heater	Nov. 20, 1877	576	170	12	859
	Hays, Henry B. (*See* O'Hanlon, Joseph, assignor.)					
	Hays, John W., *et al.* (*See* Winkler, Gustavus R., assignor.)					
194,431	Hays, Orien G., Nilwood, Ill. Washing-machine	Aug. 21, 1877	674	201	12	337
	Hays, Pinney E. (*See* Hayward & Hays.)					
	Hayssen, Herman. (*See* Silberzahn & Hayssen.)					
	Hayward, Calvin D. (*See* Howard & Hayward.)					
192,507	Hayward, John C., Selma, Ala. Locomotive fire-box	June 26, 1877	1041	313	11	1142
196,147	Hayward, John H., Jersey City, N. J. Manufacture of floor-cloth from rubber	Oct. 16, 1877	490		12	646
189,215	Hayward, Nahum, and P. E. Hays, Roanoke, Ind. Carriage-seat lock	Apr. 3, 1877	180	62	11	583
187,628	Hayward, Thomas B., South Acworth, N. H. Sap-bucket	Feb. 20, 1877	715	231	11	317
	Hayworth, David M. (*See* Dye, Nelson T., assignor.)					
187,757	Hazard, James, and J. Greenwood, Rochester, N. Y. Machine for jointing staves	Feb. 27, 1877	856	267	11	344
188,514	Hazard, Oliver S., Coventry, R. I. Sewing-machine	Mar. 20, 1877	566	174	11	471
198,020	Hazelrigg, John W., assignor to self, W. T. Hazelrigg, and B. P. Hustead, El Dara, Ill. Rotary churn	Dec. 11, 1877	318	98	12	1001
	Hazelrigg, Wesley T., *et al.* (*See* Hazelrigg, John W., assignor.)					
188,010	Hazelton, Frederick D., Boston, Mass. Cutter-holder for metal-lathes	Mar. 6, 1877	53	15	11	388
	Hazelton, Horace L., *et al.* (*See* Harris, Samuel, jr., assignor.)					
189,035	Hazelton, Simon A., Linden, N. Y. Button-fastening	Apr. 3, 1877	24	8	11	562
193,606	Hazlet, John D., Meadville, Pa. Valve-gear for steam-engines	July 31, 1877	1106	332	12	197
197,780	Same.....same	Dec. 4, 1877	76	24	12	956
188,628	Heacock, J. Stone, Buffalo, N. Y. Lawn-sprinkler	Mar. 20, 1877	665	206	11	486
	Head, Smith. (*See* Miller & Head.)					
197,363	Headington, Joel A., Mexico, Mo. Device for protecting and irrigating fruit-trees	Nov. 20, 1877	667	199	12	874
	Headley, William L. (*See* Bull, Henry C., assignor.)					
	Heagerty, James. (*See* McCarty, Ezra B., assignor.)					
198,615	Heald, Alfred, Philadelphia, Pa. Carpet fabric	Dec. 25, 1877	938	286	12	1106
194,965	Healey, Thomas M., and C. W. Rogers, Washington, D. C. Ore-concentrator	Sept. 11, 1877	219	68	12	438
193,761	Healy, Lucien B., San Francisco, Cal. Liquid-measure	July 31, 1877	1261	378	12	218
195,124	Healy, William F., and J. Beggs, Paterson, N. J. Brake for elevators	Sept. 11, 1877	383	115	12	461
194,597	Hearle, Charles C., Montreal, Canada. Hydro-pneumatic fire-extinguisher	Aug. 28, 1877	840	250	12	370
193,510	Hearn, Edwin R., Jersey City, N. J. Plug-tobacco	July 24, 1877	991	300	12	171
191,142	Heartsill, Abram, Lonisville, Tenn. Reciprocating churn	May 22, 1877	1065	318	11	909
189,216	Heath, Courtney K., Toledo, Ohio. Drop-tube steam-boiler	Apr. 3, 1877	181	62	11	283
188,629	Heath, Edward, Fowlerville, N. Y. Grain-binder	Mar. 20, 1877	665	{206 207}	11	486
198,199	Heath, Eugene A., New York, N. Y. Cuspadore	Dec. 18, 1877	517	159	12	1036
186,248	Heath, George B., Philadelphia, Pa. Bread-cutter	Jan. 16, 1877	433	133	11	81
198,542	Heath, Laban, Boston, Mass. Stand for magnifying-glasses	Dec. 25, 1877	867	264	12	1096
186,730	Heath, Lorenzo P., assignor to Powers Paper Company, Springfield, Mass. Paper box	Jan. 30, 1877	927	288	11	168
189,036	Same.....same	Apr. 3, 1877	25	8	11	562
189,037	Same.....same	Apr. 3, 1877	25	8	11	562
189,038	Same.....same	Apr. 3, 1877	26	9	11	562
196,358	Same.....same	Oct. 23, 1877	714	205	12	685
193,950	Heath, William, Bath, Me. Snap-hook	Aug. 7, 1877	149	46	12	255
7,944	Heaton, Henry L., Sidney, Iowa, assignor to W. A. Knowlton. Cultivator. (Reissue)	Nov. 13, 1877	489	{145 146}	12	
186,249	Heaton, William, assignor to E. P. Chapin and F. Condit, Providence, R. I. Preparing warps for looms	Jan. 16, 1877	433	133	11	82
192,915	Heavener, Floyd, Laramie City, Wyo. Car-coupling	July 10, 1877	378	112	12	72
194,758	Same.....same	Aug. 28, 1877	992	295	12	391
	Hebard, Albert K. (*See* Kelly & Hebard.)					
197,031	Hebard, Albert K., Cambridgeport, assignor to Mason & Hamlin Organ Company, Boston, Mass. Organ-bellows valve	Nov. 13, 1877	312	93	12	813
	Hebard, Charles W. (*See* Hotchkiss & Hebard.)					
	Hebberd, Isaac N. (*See* Hoskin, Robert, assignor) (Reissue.)					
	Heberling, George P. (*See* Scholl & Heberling.)					
196,665	Heberling, John, assignor of one-half interest to G. W. Marquardt, Iowa City, Iowa. Napkin ring and holder	Oct. 30, 1877	1032	300	12	741
196,898	Same.....same	Nov. 6, 1877	169	49	12	783
	Heckerman, William B. (*See* Anderson, Axel W., assignor.)					
192,761	Heckert, Charles, New York, N. Y. Compound vase or bouquet-holder	July 3, 1877	201	58	12	40
188,738	Heckert, William, Providence, R. I. Speed-indicator	Mar. 27, 1877	798	242	11	511
193,951	Same.....Clamp for carpenters and cabinet-makers	Aug. 7, 1877	151	46	12	255
198,109	Heckman, Louis, assignor of two-thirds interest to W. H. Wade and E. P. Davis, Wrentham, Mass. Ornamental chain-link	Dec. 11, 1877	405	127	12	1013
7,989	Hedges, Isaac A., Saint Louis, Mo., assignor, by mesne assignments, to Blymyer Manufacturing Company. Mill for grinding cane (Reissue)	Dec. 11, 1877	485	{151 152}	12	1024
197,218	Hedges, Samuel P., Greenport, N. Y. Oil-press	Nov. 20, 1877	525	155	12	852
197,364	Heeley, James L., Attleborough Falls, Mass., assignor to Davison Brothers, New York, N. Y. Ornamental chain-link	Nov. 20, 1877	668	200	12	874
7,535	Heer, David, assignor to H. D. Hirst, Philadelphia, Pa. Lathe (Reissue)	Feb. 27, 1877	1060	327	11	371
189,733	Heffernan, Pierce, assignor to self, U. Widmer, and H. Trottman, Philadelphia, Pa. File	Apr. 17, 1877	738	226	11	671
193,869	Hefner, John, Jamestown, Mich. Bee-hive	Aug. 7, 1877	66	21	12	544
196,577	Hege, Constantine A., Salem, N. C. Head-block for saw-mills	Oct. 30, 1877	948	274	12	729
192,153	Hegeler, Edward C., and F. W. Matthiessen, La Salle, Ill. Relief apparatus for rolling-mills	June 19, 1877	669	205	11	1081
194,598	Same..... Dog for sheet-metal rolling-mills	Aug. 28, 1877	841	250	12	370
	Height, Harry R. (*See* Bennett & Height.)					
194,090	Hein, Robert, Saint Mary's, Pa. Tanning	Aug. 14, 1877	311		12	283

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
195,602	Heinel, John N., Philadelphia, Pa. Show-stand for exhibiting garments	Sept. 25, 1877	871	259	12	547
186,250	Heinen, Christopher, Leavenworth, Kans. Saw-set	Jan. 16, 1877	435	134	11	82
192,991	Same.....same	July 10, 1877	448	135	12	82
195,275	Samo.....Wagon-brake	Sept. 18, 1877	551	160	12	493
197,631	Heiner, Adam, Baltimore, Md. Hydraulic rotary motor	Nov. 27, 1877	960	285	12	925
190,138	Heines, Michael, Fort Sill, Indian Ter. Car-coupling	May 1, 1877	24	7	11	750
197,934	Heinz, John H., Sharpsburg, Pa. Pickle-assorter	Dec. 11, 1877	235	72	12	988
	Heinz, Pierce and Munschauer. (*See* Stark, Michael J., assignor.)					
	Heither, Jacob, jr., *et al.* (*See* Morton, James G., assignor.)					
	Heiz, Joseph. (*See* Geiler, Paul, assignor.)					
	Heizmann, C. Raymond, *et al.* (*See* Hickman, Francis, assignor.)					
198,384	Helden, Charles W., Florence, Ala. Vehicle-wheel	Dec. 18, 1877	703	213	12	1053
194,599	Hellman, Louis, and G. Gregory, Chicago, Ill. Paper-case or pocket	Aug. 28, 1877	842	251	12	370
186,559	Hellman, Louis, New York, N. Y. Hanger for garments	Jan. 23, 1877	761	233	11	136
188,133	Hellwig, John, McGregor, Iowa. Bolt and rivet cutter	Mar. 6, 1877	165	50	11	402
192,827	Helm, J. Henry, Allegheny, Pa. Die for welding chain-links	July 10, 1877	300	87	12	61
193,607	Same.....Die for welding links	July 31, 1877	1108	332	12	197
193,608	Same.....Machine for welding chain-links	July 31, 1877	1109	{332 333}	12	197
192,508	Helmer, Nicholas, New York, N. Y. Hair dressing	June 26, 1877	1042	313	11	1142
	Helmstaeler, Adam. (*See* Lienau, Christian C., assignor.)					
193,952	Hemenway, Frank F., Troy, N. Y. Automatic cut-off gear for steam-engines	Aug. 7, 1877	151	46, 47	12	255
196,092	Hemingray, Ralph G., Covington, Ky. Cleaning glass from the ends of blow-pipes	Oct. 16, 1877	428	125	12	637
190,584	Hemp, Lewis W., and S. Knight, Saint Louis, Mo.; said Knight assignor to said Hemp. Tea-caddy	May 8, 1877	482	144	11	817
188,901	Hempler, Henry H., Washington, D. C. Eye-glass	Mar. 27, 1877	958	293	11	534
186,560	Hempstead, Beall, Pulaski County, Ark. Bale-tie	Jan. 23, 1877	762	234	11	136
187,758	Hempstead, Beall, Little Rock, Ark. Bale-tie	Feb. 27, 1877	857	267	11	345
191,141	Same.....Lamp-burner	May 22, 1877	1063	318	11	909
192,259	Same.....Lamp	June 19, 1877	775	235	11	1095
192,992	Hench, Samuel N., Ickesburg, assignor of one-half interest to W. A. Dromgold, Patterson, Pa. Cultivator	July 10, 1877	449	135	12	82
	Henderson & Co. (*See* Miller, Henry S., assignor.)					
	Henderson, Albert H. (*See* Towson, William W., assignor.)					
193,406	Henderson, David E., Leetown, W. Va. Auger	July 24, 1877	891	272	12	157
	Henderson, David W. (*See* Snyder & Henderson.)					
195,817	Henderson, Ewen C., assignor to self and H. Fraser, Pictou, Nova Scotia. Slate-holder.	Oct. 2, 1877	124	36	12	579
	Henderson, Henry T. (*See* Henderson & Rhodes.)					
196,118	Henderson, John G. and H. T., and M. Rhodes, assignors to H. T. Henderson and M. Rhodes, Keokuk, Iowa. Brick-machine	Oct. 16, 1877	461	134	12	641
188,902	Henderson, William E., Winona, Minn. Hot-air furnace	Mar. 27, 1877	958	293	11	534
197,128	Same.....same	Nov. 13, 1877	417	123	12	828
198,021	Hendey, George E., assignor to self and H. A. Matthews, Waterbury, Conn. Whip-socket fastening	Dec. 11, 1877	319	98	12	1001
186,130	Hendley, James W., assignor to D. N. Bennett and S. S. Wright, Cedar Hill, N. C. Plow	Jan. 9, 1877	314	96	11	58
195,363	Hendley, William, Chicago, Ill. Bedstead	Sept. 18, 1877	628	186	12	504
190,585	Hendrick, Dexter D., assignor of one-half interest to H. B. Rogers, Calumet, Mich. Ore-washer	May 8, 1877	483	144	11	817
197,129	Hendrick, Eli E., Carbondale, Pa. Lubricating-oil compound	Nov. 13, 1877	417		12	828
	Hendricks, Edmund. (*See* Clark, James B., assignor.)					
188,011	Hendricks, Theodore, New York, assignor to W. E. Price, Brooklyn, N. Y. Key for locks	Mar. 6, 1877	54	16	11	388
187,273	Hendrickson, Darius J., West Meredith, N. Y. Sleigh and shoe	Feb. 13, 1877	354	113	11	{262 263}
192,260	Hendrickson, Justus J., assignor of one-half interest to J. Kinzie, Bridgeport, Pa. Grain-separator	June 19, 1877	776	235	11	1095
	Hendryx & Bartholomew. (*See* Hendryx, Andrew B., assignor.)					
190,855	Hendryx, Andrew B., assignor to Hendryx & Bartholomew, Ansonia, Conn. Metal knob	May 15, 1877	766	228	11	862
	Hendryx, James I. (*See* Gordon, Myers, Telford & Hubbard, assignors.)					
	Hendy, Joshua. (*See* Cochrane & Hendy.)					
194,349	Hencage, Robert, assignor of one-half interest to A. C. Stevens, Buffalo, N. Y. Locking device for safe-doors	Aug. 21, 1877	595	178	12	327
195,276	Same.....Automatic hatchway-door	Sept. 18, 1877	552	161	12	493
195,125	Henery, Alvanes P., Malta, Ohio. Cultivator	Sept. 11, 1877	384	115	12	462
191,760	Henis, Charles F., and C. F. Pike, Philadelphia, Pa. Submarine boat	June 12, 1877	242	76	11	1014
188,630	Henius, Max W., assignor to M. Cohn, New York, N. Y. Corset	Mar. 20, 1877	671	207	11	486
188,012	Henkle, Leonard, assignor of two-thirds interest to E. C. Smith, Rochester, N. Y. Metal roof	Mar. 6, 1877	55	16	11	388
191,677	Henkle, Leonard, assignor of one-half interest to W. H. Moore, Rochester, N. Y. Fire-escape	June 5, 1877	158	49	11	998
192,993	Henley, Henry, Bloomington, Ind. Agricultural boiler	July 10, 1877	449	136	12	82
186,837	Hennessy, John F., Juneau, Wis. Churn	Jan. 30, 1877	1041	321	11	182
	Hennessey, Timothy. (*See* Prentice, Miles S., assignor.)					
188,052	Henning, George C., Washington, D. C. Hunting-vest	Mar. 6, 1877	95	28	11	393
198,299	Same.....Overalls	Dec. 18, 1877	622	189	12	1051
195,365	Henninger, Julius, Quincy, Ill. Toy whirligig	Sept. 18, 1877	630	187	12	505
	Henriehs, Charles F. A. (*See* Angell, Albert, assignor.)					
196,148	Henriehs, Charles F. A., Brooklyn, N. Y. Mineral lamp-wick	Oct. 16, 1877	491		12	646
190,586	Henriehs, Peter, Erie, Pa. Show-case	May 8, 1877	484	144	11	818
188,515	Henriksen, Hans P., Copenhagen, Denmark, assignor to self and L. Hansen, Brooklyn, N. Y. Machine for sewing gloves	Mar. 20, 1877	566	{174 175}	11	471
195,364	Henry Benjamin F., assignor to self, B. and J. T. Cooper, and J. Mayfield, Saline County, Mo. Washing-machine	Sept. 18, 1877	629	187	12	505
187,380	Henry, Cornelius, East Somerville, Mass. Drop-light	Feb. 13, 1877	402	145	11	276
192,994	Same.....same	July 10, 1877	450	136	12	82
192,995	Henry, Cornelius, East Somerville, Mass., assignor of one-half interest to A. H. Evans, Washington, D. C. Fire-escape	July 10, 1877	451	136	12	82
197,130	Henry, Frank, Philadelphia, Pa. Tuck-marker	Nov. 13, 1877	418	123	12	828
7,672	Henry, George, Hamilton, Canada. Composition for preserving animal and vegetable substances.....(Reissue)	May 8, 1877	583		11	830
188,903	Same.....Composition for preserving corpses	Mar. 27, 1877	960		11	534
	Henry, John J. (*See* Grant & Henry.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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188,904	Henry, Joseph, assignor to self and R. P. Gormully, Chicago, Ill. Skylight-bar	Mar. 27, 1877	961	294	11	534
190,856	Henry, Joseph, Chicago, Ill. Skylight	May 15, 1877	767	228	11	862
	Henry, Matilda. (*See* Henry, Thomas, assignor.)					
	Henry, Nicodemus. (*See* Phillips, Benjamin F., assignor.)					
193,705	Henry, Richmond, Glassborough, N. J. Adjustable support for lamp-reflectors	July 31, 1877	1208	362	12	210
193,953	Henry, Thomas, assignor to M. Henry, Rockport, Ohio. Horseshoe	Aug. 7, 1877	152	47	12	255
191,588	Henry, William, assignor of one-half interest to G. W. Moberly, Trenton, Mo. Sulky-plow	June 5, 1877	72	22	11	987
191,962	Hense, Charles, Washington, D. C., assignor to G. W. Cook, Washington, D. C. Artificial-stone pavement	June 12, 1877	445	138	11	1040
188,360	Henshall, Samuel, Philadelphia, Pa. Machine for sewing boots and shoes	Mar. 13, 1877	401	125	11	440
193,447	Same.....Sole-edge-bending machine	July 24, 1877	931	283	12	163
196,578	Henson, Marvin T., and M. Asborn, assignor of one-third interest to S. Baker, Port Jefferson, Ohio. Vise	Oct. 30, 1877	949	275	12	729
	Henszey, William P., *et al.* (*See* Longstreth, Edward, assignor.)					
	Hentlein, Gilbert F. (*See* Sperry, Alfred W., assignor.)					
191,587	Herald, Joseph, Hamilton, Canada. Piano-forte bridge	June 5, 1877	72	21	11	987
189,936	Herbert, Henry J., London, England, and E. R. Wilbur, New York, N. Y. Card-holder	Apr. 24, 1877	962	294	11	709
191,052	Herbert, Paule A., New Orleans, La. Animal-trap	May 22, 1877	980	291	11	898
192,332	Herchelrode, Henry C., and J. E. Schonacker, Dayton, Ohio. Horse hay-rake	June 26, 1877	872	263	11	1120
	Herdtfelder, John. (*See* Dilkescamp, Adolph, assignor.)					
	Herig & Sons, John. (*See* Wagner, John P., assignor.)					
187,708	Herman, Hervy, assignor of one-half interest to J. Watson, Philadelphia, Pa. Burglar-proof safe-door	Feb. 27, 1877	810	251	11	338
191,801	Hermance, Charles W., deceased, L. W. Hermance, and J. D. Mott, Moses Kill, administrators and assignors of one-half interest to A. S. Burdick, Saratoga Springs, N. Y. Car-starter	June 12, 1877	284	88, 89	11	1019
	Hermance, Lydia W., administratrix. (*See* Hermance, Charles W.)					
189,458	Hermance, Robert, Fort Miller, N. Y. Car-starter	Apr. 10, 1877	449	141	11	625
195,927	Same.....Lifting-jack	Oct. 9, 1877	250	70	12	604
7,489	Hermann, August, and W. H. Taylor, assignor, by mesne assignments, to Yale Lock Manufacturing Company, Stamford, Conn. Anode for electroplating with nickel. (Reissue)	Feb. 6, 1877	278	91	11	240
190,681	Hermann, Charles F., Saint Louis, Mo. Form of sealing-wax or rosin for use, the same being in drops or disks	May 15, 1877	606		11	841
	Hermann, Frederick. (*See* Hermann, Julius and F.)					
197,365	Hermann, Julius and F., Campbellsport, Wis. Bed-bottom	Nov. 20, 1877	670	200	12	874
196,013	Hermans, Edward E., Reed's Landing, Minn., and W. D. Smith, Keithsburg, Ill. Feed-water heater and purifier	Oct. 9, 1877	335	95	12	616
194,907	Hermes, Mathias, Niles Centre, Ill. Garden-sprinkler	Sept. 4, 1877	148	46	12	421
	Herren, James W. (*See* Caldwell & Herren.)					
190,857	Herreshoff, James B., assignor to self and S. L. Herreshoff, Bristol, R. I. Water-tube steam-generator	May 15, 1877	767	228	11	863
189,459	Herreshoff, Nathaniel G., Providence, R. I. Construction of sailing-vessels	Apr. 10, 1877	450	141	11	625
	Herreshoff, Sarah L. (*See* Herreshoff, James B., assignor.)					
197,632	Herrick, George W., assignor to Michigan Stove Company, Detroit, Mich. Stove-damper and flue-strip	Nov. 27, 1877	961	286	12	925
189,858	Herring, Anaxamander, Cohoes, N. Y. Detecting defects in railway-rails	Apr. 24, 1877	885	270	11	698
190,433	Herring, Asa H., Haverhill, Mass. Shoe	May 8, 1877	337	99	11	799
196,525	Herriot, John, Cleveland, Ohio. Lathe-chuck	Oct. 30, 1877	898	200	12	722
195,126	Hersey, Alonzo, assignor of one-half interest to J. P. Scranton, Monroe, Mich. Beer-forcing apparatus	Sept. 11, 1877	384	116	12	462
189,625	Hersey, Charles H., assignor to self and F. C. Hersey, Boston, Mass. Drying and cooling appparatus	Apr. 17, 1877	629	195	11	657
	Hersey, Francis C. (*See* Hersey, Charles H., assignor.)					
196,227	Hersey, Randolph, Montreal, Canada. Horseshoe-nail-finishing machine	Oct. 16, 1877	567	{164 165}	12	656
188,361	Hersh, James N., Allentown, Pa. Stove and heater	Mar. 13, 1877	402	125	11	440
187,136	Hershey, Benjamin, Erie, Pa. Steam-boiler furnace	Feb. 6, 1877	207	68	11	231
187,381	Same.....Air and steam blower for furnaces	Feb. 13, 1877	462	145	11	277
189,217	Hershey, Benjamin, Erie, assignor of one-half interest to J. E. Shaw, Pittsburg, Pa. Hydrocarbon-furnace	Apr. 3, 1877	182	62	11	583
189,218	Same.....Grate for furnaces	Apr. 3, 1877	183	62, 63	11	583
189,219	Same.....Fire-box for steam-boilers	Apr. 3, 1877	184	63	11	583
193,083	Hershey, Benjamin, Erie, assignor to Pittsburg Chain and Car Link Manufacturing Company, New Brighton, Pa. Machine for welding and finishing chain-links	July 17, 1877	545	165	12	102
193,084	Same.....Machine for welding chain-links	July 17, 1877	547	165	12	103
121,282	Hersman, George, Hersman, Ill. Hay-elevator	May 29, 1877	1216	365	11	930
	Herverk, John. (*See* McLean & Herverk.)					
	Herz, Joseph. (*See* Seiler, Paul, assignor.)					
197,366	Herzog, Ignatz, Ridgefield, N. J. Apparatus for the manufacture of illuminating-gas	Nov. 20, 1877	670	200	12	874
189,039	Herzog, John H., Cincinnati, Ohio. Station-indicator	Apr. 3, 1877	26	9	11	562
195,366	Hescock, Henry W., Hubbard, Ohio. Evaporating-pan	Sept. 18, 1877	631	187	12	505
192,866	Heshuysen, William F., Amsterdam, Holland, and C. Burn, London, England. Car-mover	July 10, 1877	335	99	12	65
186,006	Hess, Daniel, Greenville, Miss. Ditching-machine	Jan. 9, 1877	108	60	11	43
187,382	Same.....Tube-fastening for steam-boilers	Feb. 13, 1877	463	145	11	277
190,034	Hess, George, New York, N. Y. Extension-table	Apr. 24, 1877	1066	324	11	{721 722}
190,967	Hess, Jacob, assignor of one-half interest to L. White, Buffalo, N. Y. Chair	May 22, 1877	898	266	11	887
190,215	Hess, Jacob F., Massillon, Ohio. Machinery for forcing air into vessels containing liquids	May 1, 1877	101	29	11	759
187,274	Hess, William L., Belle Plaine, Iowa. Stove-pipe shelf	Feb. 13, 1877	355	113	11	263
191,053	Hesse, Frank K., Boston, Mass. Gage	May 22, 1877	781	292	11	898
191,529	Hesse, Frederick G., Oakland, Cal. Hoisting-machine (hydraulic)	June 5, 1877	19	6	11	979
195,277	Hesse, Joseph, San Francisco, Cal. Carpet-sewing machine	Sept. 18, 1877	553	161	12	491
190,758	Hesselbom, Eric M., Riceford, Minn. Straw-cutter	May 15, 1877	882	262	11	850
188,631	Hester, Joseph G., Dutchville, N. C. Tobacco-hanger	Mar. 20, 1877	672	207	11	436
188,013	Hetfield, Daniel G., Rahway, N. J. Trotting-sulky	Mar. 6, 1877	56	16	11	388
193,511	Hetzler, John H., Baltimore, Md. Propelling canal-boats	July 24, 1877	993	300	12	171
194,350	Heuer, Friedrich W., Vienna, Austria, assignor to E. H. Naymann, New York, N. Y. Machine for printing on glass, porcelain, &c.	Aug. 21, 1877	596	173	12	327

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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188,362	Heuermann, John, Chicago Ill Fire-escape	Mar. 13, 1877	404	126	11	441
195,507	Heuermann, William, Sedalia, Mo. Milk-pail	Sept. 25, 1877	786	232	12	535
193,512	Heunsch, Rudolph, assignor of one-half interest to G. Follansbee and R. C. Hewitt, Washington, D. C. Machine for setting saw-teeth	July 24, 1877	994	300	12	171
191,341	Heuser, Max, assignor to self, E. Wolte, and C. Otto, jr., New York, N. Y. Trigger for fire-arms	May 29, 1877	1263	381	11	945
190,587	Heusner, Louis, Barmen, Prussia. Lactometer	May 8, 1877	425	145	11	818
198,385	Hewes, Benjamin F., Crete, Ill. Machine for sanding brick-molds	Dec. 18, 1877	764	214	12	1063
196,526	Hewitt, Charles B., Racine, Wis. Well-boring apparatus	Oct. 30, 1877	899	260	12	722
	Hewitt, Herbert H. (*See* Susemihl & Hewitt.)					
193,654	Hewitt, John, Hamilton, Canada. Lightning-rod	July 31, 1877	1167	349	12	264
198,110	Hewitt, John, Saint Louis, Mo. Locomotive-spark arrestor	Dec. 11, 1877	406	127	12	1014
189,626	Hewitt, John S, Wheatland, Mo. Hay raker and loader	Apr. 17, 1877	630	195	11	657
	Hewitt, R. C., *et al.* (*See* Heunsch, Rudolph, assignor.)					
	Hey, Emanuel. (*See* Wild, James, assignor.)					
193,334	Hey, Jacob, Newark, N. J. Show-case	July 24, 1877	825	253	12	148
7,488	Heyl, Henry R., assignor to Novelty Paper Box Company, Philadelphia, Pa. Paper box (Reissue)	Feb. 6, 1877	277	90	11	230
7,608	Same Machine for forming and inserting wire staples in paper boxes. (Reissue)	Apr. 17, 1877	835	258	11	683
191,426	Heyl, Henry R., and H. Brehmer, assignor to Novelty Paper Box Company, Philadelphia, Pa. Book-sewing machine	May 29, 1877	1335	405, 466	11	955
195,603	Heyl, Henry R., Philadelphia, Pa. Device for inserting metallic staples	Sept. 25, 1877	872	259	12	547
	Heyl, John, *et al.* (*See* Morgan, Curtis C., assignor.)					
	Heyl, Valentine, *et al.* (*See* Morgan, Curtis C., assignor.)					
192,996	Heysinger, Isaac W., Philadelphia, Pa. Sausage-stuffer	July 10, 1877	452	136	12	82
194,679	Same Breech-loading fire-arm	Aug. 28, 1877	913	272	12	380
194,680	Same Lock for fire-arms	Aug. 28, 1877	915	272	12	380
	Heywood Brothers & Co. (*See* Heywood, Henry, assignor.)					
187,465	Heywood, Daniel H., Boston, Mass. Car-seat	Feb. 20, 1877	561	173	11	296, 297
198,386	Heywood, Henry, assignor to Heywood Brothers & Co., Gardner, Mass. Chair	Dec. 18, 1877	704	214	12	1063
192,368	Hezekiah, Henry E., New Orleans, La. Picture-exhibitor	June 26, 1877	909	273	11	1125
193,762	Hibbard, Silas H., La Salle, assignor of two-thirds interest to C. Brunner and U. Snow, Peru, Ill. Platform-scales	July 31, 1877	1261	379	12	218
192,580	Hickey, Patrick, and C. W. Miles, Auburn, N. Y. Shuttle-box mechanism for power-looms	July 3, 1877	26	8	12	16
193,247	Hickey, Patrick, Philadelphia, Pa. Pail	July 17, 1877	715	219	12	125
192,433	Hickey, Thomas J., Rondout, N. Y. Steam furnace-blower	June 26, 1877	968	290	11	1132
186,561	Hickman, Francis, assignor of seven-ninths interest to C. R. Heizmann, B. F. Morret, and L. Miller, Reading, Pa. Machine for rolling hoop-iron	Jan. 23, 1877	762	234	11	136
195,129	Hickman, Francis, Reading, Pa. Machine for rolling metal	Sept. 11, 1877	388	116, 117	12	462
195,130	Same Screw-gearing for rolling-mills	Sept. 11, 1877	389	117	12	463
195,761	Hickok, Dewey K., Morrisville, Vt. Clothes-drier	Oct. 2, 1877	68	21	12	571
194,497	Hickok, William O., and A. Cooper, Harrisburg, Pa.; said Cooper assignor to said Hickok. Paper-ruling machine	Aug. 21, 1877	740	220, 221	12	347
196,666	Hickox, Douglas, Springfield, Ill. Manufacturing paper-pulp	Oct. 30, 1877	1033		12	741
190,759	Hicks, Charles E., Chelsea, Mass. Sash-fastener	May 15, 1877	683	203	11	851
	Hicks, John. (*See* Huntington & Hicks.)					
	Hicks, Marcus H. (*See* Davenport & Hicks.)					
189,220	Hicks, Oliver H., Baltimore, Md. Hoe	Apr. 3, 1877	185	63	11	583
7,788	Hicks, William C., Summit, N. J. Drop-press (Reissue)	July 10, 1877	526	159	12	92
188,293	Hicks, William H., Brooklyn, N. Y. Bottle-stopper	Mar. 13, 1877	334	105	11	431
191,283	Same Bottle-closing device	May 29, 1877	1217	366	11	939
193,870	Same same	Aug. 7, 1877	67	22	12	244
195,127	Same same	Sept. 11, 1877	385	116	12	462
195,128	Same same	Sept. 11, 1877	386	116	12	462
196,527	Same Bottle-stopper fastener	Oct. 30, 1877	901	260	12	722
187,851	Hicks, William S., New York, N. Y. Watch-chain bar	Feb. 27, 1877	954	296	11	357
190,488	Same Combined watch-chain bar and button-hook	May 8, 1877	393	114	11	805
190,858	Hien, Philip, assignor to S. Hien, and B. D. Buford, Rock Island, Ill. Car-coupling	May 15, 1877	768	228	11	863
	Hien, Sarah, *et al.* (*See* Hien, Philip, assignor.)					
191,871	Hiester, Mary C., Philadelphia, Pa. Knee-protector	Sept. 4, 1877	113	35	12	416
192,069	Higbie, William H., Peoria, Ill. Grain conveyer and dryer	June 19, 1877	578	175	11	1070
189,699	Higby, Luther E., Belleville, N. J. Machine for making rope	Apr. 3, 1877	78	28	11	569
198,022	Higgins, Ambrose M., and N. Devereux, Manton, R. I. Lubricator	Dec. 11, 1877	319	99	12	1001
197,131	Higgins, Charles J., Hallowell, Me. Shuttle for looms	Nov. 13, 1877	419	123	12	828
196,801	Higgins, George W., Shelbyville, Ind. Saw-frame attachment	Nov. 6, 1877	65	19	12	770
185,919	Higgins, Isaac H., and A. T. Gifford, Gloucester, Mass. Construction of boats	Jan. 2, 1877	110	33	11	22
186,731	Higgins, James, Westfield, N. J. Churn	Jan. 30, 1877	928	288	11	108
194,681	Higgins, James, and P. Traynor, Westfield, N. J. Velocipede	Aug. 28, 1877	917	273	12	381
198,616	Higgins, James, Westfield, N. J. Cultivator	Dec. 25, 1877	938	287	12	1106
	Higgins, John, *et al.* (*See* Arnold, Lauren B., assignor.)					
	Higgins, John. (*See* Haylock & Benedict, assignors.)					
	Same (*See* Haylock, William H., assignor.)					
189,859	Higgins, John J., New York, N. Y. Umbrella-runner	Apr. 24, 1877	886	270	11	698
	Higgins, Timothy. (*See* Nealon & Higgins.)					
	Same (*See* Nealon, Higgins & Knott.)					
	Higgins, William W. (*See* Satchell & Higgins.)					
196,451	Higgonson, Andrew, Liverpool, England. Reciprocating steam-engine	Oct. 23, 1877	798	230	12	698
	Highland Foundry Company. (*See* Simpson, Robert, assignor.)					
	Same (*See* Towne, William J., assignor.)					
	Hight, Edward G., *et al.* (*See* Johnson, James B., assignor.)					
191,589	Hight, John W., Waltham, Mass. Holdback	June 5, 1877	73	22	11	986
188,905	Hildebrand, Charles, Youngstown, Ohio. Measuring-pump	Mar. 27, 1877	962	294	11	531
121,284	Hildebrand, George A., assignor to T. D. Carter, Asheville, N. C. Horse-detacher	May 29, 1877	1219	366	11	939
196,014	Hiler, Selah, New York, N. Y. Knob for doors, &c	Oct. 9, 1877	336	95	12	616
197,468	Same Vitrified knob	Nov. 27, 1877	788	235	12	960
190,216	Hiles, Charles A. and T. L., Chicago, Ill. Ice-plow	May 1, 1877	102	29	11	759
	Hiles, Theron L. (*See* Hiles, Charles A. and T. L.)					
190,682	Hilger, John, Bellevue, Iowa. Hoof-parer	May 15, 1877	607	180	11	841
	Hilkens, Christopher. (*See* Behrens, Nicolaus, assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
196,562	Hill, Alanson G., Kendallville, Ind. Bee-hive	Jan. 23, 1877	763	234, 235	11	136
	Hill, Barbara H. (*See* Marshall, Charles E., assignor.)					
185,862	Hill, Benjamin B., Springfield, Mass. Hand-stamp	Jan. 2, 1877	47	15	11	15
196,802	Hill, Benjamin R., sr., Pompton, N. J. Brush	Nov. 6, 1877	65	20	12	770
197,132	Hill, Charles F., Hazleton, Pa. Book-case	Nov. 13, 1877	420	124	12	829
	Hill, Christian C. (*See* Wright & Hill.)					
195,358	Hill, Edward A., Chicago, Ill. Electrical gas-burner	Sept. 18, 1877	623	185	12	504
198,459	Hill, Eugene, and V. L. Thurston, Mogadore, Ohio. Beefsteak-pounder	Dec. 25, 1877	789	239	12	1095
7,649	Hill, Francis H., Chicago, Ill. Coffin (Reissue)	May 1, 1877	298	87	11	785
	Hill, Frank A. (*See* Gillis, David T., assignor.)					
191,342	Hill, Frank A., San Leandro, Cal. Sulky-plow	May 29, 1877	1264	381	11	945
198,512	Same. Harrow	Dec. 25, 1877	842	256	12	1092
190,489	Hill, Henry H., Moline, Ill. Whiffletree-hook	May 8, 1877	393	115	11	805
	Hill, Henry W. (*See* Egan & Hill.)					
196,976	Hill, Hugh W., Decatur, Ill. Gage for handling and distributing paper, circulars, &c	Nov. 13, 1877	257	76	12	805
189,894	Hill, James C., A. C. Pilliner, and W. Williams, Oakfields Works, parish of Llantarnam, England, Reducing old rails and fag ends of rails to bars	Apr. 24, 1877	925	281	11	703
188,363	Hill, James F., Fleetwood, Pa. Thill-coupling	Mar. 13, 1877	406	126	11	441
197,367	Hill, James M., and J. Forsyth, Brighton, Tenn. Horse-power	Nov. 20, 1877	671	200, 201	12	874
	Hill, James W. (*See* French, John, assignor.)					
194,351	Hill, James W., South Saint Louis, Mo. Car-axle box	Aug. 21, 1877	597	178	12	327
197,779	Hill, John, South Norwalk, Conn. Pill-machine	Dec. 4, 1877	76	24	12	956
186,251	Hill, John B., Jersey City, N. J. Ventilator	Jan. 16, 1877	435	134	11	82
191,054	Hill, John L., Climax, Kans. Corn-planter and grain-drill	May 22, 1877	981	292	11	898
186,007	Hill, John R., Bloomfield, Iowa. Ricking apparatus for hay and straw	Jan. 9, 1877	199	60	11	44
188,134	Hill, Joseph, Wabash, Ind. Lock for car-doors, &c	Mar. 6, 1877	166	51	11	402
190,968	Hill, Joseph W., Lynn, Mass., assignor of one-half interest to W. N. Munroe, Providence, R. I. Stove-polish	May 22, 1877	898		11	887
187,629	Hill, Julien S., Brooklyn, assignor to W. H. Bailey, New York, N. Y. Cigar-lighter	Feb. 20, 1877	716	222	11	317
197,515	Hill, Moses, Cleveland, Ohio. Harrow-tooth	Nov. 27, 1877	838	250	12	907
194,908	Hill, Rufus, Camden, N. J. Door for furnaces	Sept. 4, 1877	149	47	12	421
7,640	Hill, Russell S., Ipava, Ill. Device for musical instruction (Reissue)	Apr. 24, 1877	1179	356	11	737
	Hill Sewer Pipe Company. (*See* Housel, Martin J., assignor.)					
	Hill, Theodore, *et al.* (*See* Winkler, Gustavus R., assignor.)					
191,044	Hill, Warren, Boston, Mass. Billiard-cue	June 12, 1877	530	163	11	1051
193,407	Hill, Warren S., Hyde Park, Mass. Apparatus for manufacturing illuminating-gas	July 24, 1877	892	273	12	157
195,278	Hill, Wilbur F., North Manchester, Conn. Paper-cutting machine	Sept. 18, 1877	555	161	12	494
192,164	Hill, William J., Matteson, Ill. Bathing apparatus	June 19, 1877	669	205	11	1081
	Hillard, Moses, *et al.* (*See* Aldridge, Hiram, assignor.)					
191,853	Hille, Fritz, Chiswick, England. Treating sewage	June 12, 1877	335		11	1026
195,279	Hilleary, Samuel B., Rock Fork, Ohio. Gate	Sept. 18, 1877	556	162	12	494
190,035	Hillebrand, Louis, Philadelphia, Pa. Key-guide for locks	Apr. 24, 1877	1067	324	11	722
195,367	Hiller, Henry, Manchester, Great Britain. Fusible plug for steam-generators	Sept. 18, 1877	632	187	12	505
198,513	Hillhouse, Thomas G., New York, N. Y. Bank-check	Dec. 25, 1877	843	256	12	1092
197,133	Hills, Addison K., and W. E. Berens, Buffalo, N. Y. Reversible seat for hall-valves	Nov. 13, 1877	421	124	12	829
193,117	Hills, Martin, Trenton, N. J. Slate-frame attachment	July 17, 1877	588	177	12	108
	Hills, Norman. (*See* Bell & Hills.)					
	Hillstrom, Charles O. (*See* Winger, Hans H., assignor.)					
191,854	Hillyer, James S., Rockford, Minn. Grain-scourer	June 12, 1877	338	104	11	1026
191,427	Hillyer, Philetus B., Rochester, Minn. Combined anvil and vise	May 29, 1877	1340	406	11	955
	Hilpert, Edward. (*See* Muller & Hilpert.)					
197,032	Hilsabeck, Frederick L., Shelbyville, Ill. Cultivator	Nov. 13, 1877	313	93	12	813
194,432	Hilty, Cyrus Y., Apollo, Pa., assignor to self and J. Kirkwood. Rotary harrow	Aug. 21, 1877	675	201	12	338
	Hiltzhimer, Thomas M., *et al.* (*See* Bowers, Marcus M., assignor.)					
196,579	Himmeger, Joseph T., La Rue, Ohio. Horse-detacher	Oct. 30, 1877	950	275	12	730
188,632	Himrod, Charles, Youngstown, Ohio, assignor to self and A. S. Bertolet, Crown Point, N. Y. Charging and managing blast-furnaces	Mar. 20, 1877	673	208	11	487
193,706	Hinchliffe, William, Nashville, Tenn. Scroll-sawing machine	July 31, 1877	1209	363	12	211
188,053	Hinchman, Joseph C., Medford, N. J. Cranberry-separator	Mar. 6, 1877	95	28	11	393
	Hinckley, Hermon, *et al.* (*See* Winkler, Gustavus R., assignor.)					
192,165	Hind, Robert R., Kohala, Hawaii, Hawaiian Islands. Compound steam-boiler	June 19, 1877	670	205	11	1082
186,343	Hinds, Charles H., New York, N. Y. Electric gas-lighting attachment	Jan. 16, 1877	540	164	11	94
191,679	Hinds, Hugh L., South Bend, Ind. Wagon-axle skein	June 5, 1877	160	49	11	998
197,971	Hinds, Silas P., Newark, N. J. Piano-forte sounding-board	Dec. 11, 1877	275	84	12	994
	Hine, Edward. (*See* Hall & Hine.)					
	Hines, S. L., *et al.* (*See* Hipperling, William, assignor.)					
186,085	Hink, David O., Maryville, Mo. Weather-strip	Jan. 9, 1877	272	82	11	53
197,552	Same. Sash-holder	Nov. 27, 1877	880	261	12	913
	Hinkle, Philip. (*See* West, Samuel A., assignor.)					
194,150	Hinkle, Squire J., Saratoga, Ind. Riding-cultivator	Aug. 14, 1877	387	115	12	292
195,368	Hinkle, Wilber W., Hood's Mills, Md. Churn-motor	Sept. 18, 1877	633	188	12	505
191,285	Hinkley, Charles C., assignor to self and J. D. Tanner, Rockford, Ill. Coupling	May 29, 1877	1220	366	11	939
194,660	Hinman, Charles D., M. and W. W. Ladd, Saint Johnsbury, Vt. Sled	Aug. 28, 1877	842	251	12	370
	Hinman, Egbert. (*See* Metz & Hinman.)					
188,364	Hinman, Franklin, assignor of one-half interest to Pound Manufacturing Company, Lockport, N. Y. Dredge-boat anchor	Mar. 13, 1877	407	127	11	441
196,977	Hinman, Frederick E., Petrolia, and F. L. Seely, assignors to Producers' Torpedo Company, Franklin, Pa. Torpedo for oil-well	Nov. 13, 1877	257	76	12	805
	Hinrichs, Charles F. A. (*See* Reistle, Charles, assignor.)					
	Same. (*See* Staehlen, William, assignor.)					
186,732	Hinrichs, Charles F. A., and C. Reistle, Brooklyn, N. Y., assignors to said Hinrichs. Lamp.	Jan. 23, 1877	923	288	11	168
198,300	Hinrichs, Charles F. A., Brooklyn, N. Y. Lamp	Dec. 18, 1877	623	189	12	1051
188,516	Hinson, James A., Oskaloosa, Iowa. Car-coupling	Mar. 20, 1877	569	175	11	472
197,851	Hinson, James A., Oskaloosa, assignor of one-half interest to A. A. Judson, Fairfield, Iowa. Car-coupling	Dec. 4, 1877	143	44	12	966
187,011	Hintz, August J., Lemont, Ill. Corn-planter	Feb. 6, 1877	95	32	11	215
188,633	Hipperling, William, New York, assignor to S. L. Hines and R. A. Donaldson, Brooklyn, N. Y., and S. A. Ginna, Plainfield, N. J. Seaming-machine	Mar. 20, 1877	674	208	11	487
	Hipsley, John R. (*See* Hipsley, Josephus, sr., and J. R.)					
197,852	Hipsley, Josephus, sr., Allegheny, and J. R. Hipsley, Pittsburg, Pa. Rail-joint	Dec. 4, 1877	143	44	12	966

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
188,135	Hipwell, Thomas, assignor to Cohansey Glass Manufacturing Company, Bridgeton, N. J. Bottle-stopper	Mar. 6,1877	166	51	11	402
195,448	Hirley, James V., Cincinnati, Ohio. Vapor-bath apparatus	Sept. 25,1877	724	214	12	526
190,859	Hirsch, Naphtalie L., and W. M. Ettinger, Philadelphia, Pa. Combined cane and pipe.	May 15,1877	769	229	11	863
	Hirsch, Philipp. (*See* Pentlarge & Hirsch.)					
187,275	Hirst, Frank, Pittsfield, Mass. Butter-mold	Feb. 13,1877	356	113	11	263
	Hirst, Henry D. (*See* Heer, David, assignor) (Reissue.)					
192,509	Hirt, Wilhelm, and J. Mahler, Pittsburg, Pa.; said Mahler assignor to said Hirt. Tool for forming lugs in the necks of fruit-jars, &c.	June 26,1877	1042	313	11	1142
	Hisey, Isaac. (*See* Vernon, Tinsley, assignor.)					
	Hitch, William S., *et al.* (*See* Going, John B., assignor.)					
188,739	Hitchcock, Alonzo, New York, N. Y. Attaching foot-treadles, &c.	Mar. 27,1877	789	242	11	511
198,617	Hitchcock, Laura Z., Kansas City, Mo. Skirt and hose suspender	Dec. 25,1877	739	287	12	1106
186,086	Hiteshew, William H., Peru, Ind. Combined pole and shaft	Jan. 9,1877	272	82	11	53
188,517	Hittell, John S., and G. W. Deitzler, San Francisco, Cal. Apparatus for collecting, storing, and utilizing heat	Mar. 20,1877	570	175	11	472
	Hittzheimer, Thomas M., jr., *et al.* (*See* Bowers, Marcus M., assignor) (Reissue.)					
195,604	Hively, Adam E., Columbia City, Ind. Cutlery-strop safe	Sept. 25,1877	873	259	12	547
185,827	Hix, Albert E., Sycamore, Ill. Stencil-pen	Jan. 2,1877	14	5	11	10
186,733	Same.....Stencil-copying press	Jan. 30,1877	930	288	11	108
192,624	Same.....Inking perforated writing	July 3,1877	70	21	12	22
	Hixson, Jacob S., *et al.* (*See* Rubicam, John H., assignor.)					
193,513	Hoadley, Richard, assignor of one-half interest to D. Lowman, Toulon, Ill. Draft-equalizer	July 24,1877	995	301	12	171
193,655	Hoadley, William H., Chenango Forks, N. Y. Stove	July 31,1877	1167	349	12	204
194,909	Hoag, Edwin W., Plattsburg, N. Y. Milk-cooler	Sept. 4,1877	150	47	12	421
	Hoag, George W. (*See* Green, Hoag & Cleaveland.)					
	Hoagland, William C. (*See* Reed, Hoagland & Newsom) (Reissue.)					
196,359	Hoak, James, assignor of one-half interest to L. Bancroft, Springfield, Ohio. Pruning implement	Oct. 23,1877	715	206	12	685
	Hoard, John W. (*See* Vanstone & Hoard.)					
	Same.....(*See* Vanstone, Samuel, assignor.)	Nov. 13,1877	421	124	12	829
197,134	Hoback, William K., Bentonville, Ark. Machine for making barrels	Nov. 27,1877	789	236	12	900
197,469	Hobart, Edward F., assignor to W. Brown, Saint Louis, Mo. Temporary binder					
	Hobart, John H., jr. (*See* Feger, Hiram C., assignor.)					
	Hobbs, George W., *et al.* (*See* Esty, William, assignor.)					
194,910	Hobbs, George W., Uxbridge, Mass. Carriage-pole tip	Sept. 4,1877	151	47	12	421
196,452	Hobbs, George W., Apple Creek, Ohio. Grain-binder	Oct. 23,1877	799	230, 231	12	698
194,520	Hobbs, John, Des Moines, Iowa. Electro-therapeutic belt	Aug. 28,1877	774	230	12	360
186,087	Hobbs, John H., Wheeling, W. Va. Chandelier	Jan. 9,1877	273	82	11	53
188,906	Hobert, Jonas G., Syracuse, N. Y. Vapor-burner	Mar. 27,1877	963	294	11	534
197,368	Hobson, B. James, assignor to self and W. H. Richardson, Covington, Ky. Rectifying apparatus	Nov. 20,1877	672	201	12	874
192,695	Hobson, John H., New Castle, Ind. Guide-pulley for band-saw	July 3,1877	147	41	12	33
188,634	Hochheimer, John, Hamilton, Ohio. Stock for screw-cutting dies	Mar. 20,1877	676	208	11	487
	Hochkofler, Rudolph, guardian. (*See* Reed, Hoagland & Newsom) (Reissue.)					
190,490	Hock, Julius, and L. P. Martin, Vienna, Austria. Hot-air engine	May 8,1877	394	115	11	806
195,605	Hock, William R., Catasauqua, Pa. Sausage-stuffer	Sept. 25,1877	873	260	12	548
193,248	Hockenhull, George R., Berlin, Wis. Grain-elevator and bag-filler	July 17,1877	716	219	12	125
	Hoddy, Philip, *et al.* (*See* Sherwood, Obadiah, jr., assignor.)					
	Hodge, Alfred L. (*See* Pinney & Hodge.)					
189,558	Hodge, Ephraim C., assignor of one-half interest to D. Ford, Oneonta, N. Y. Reversible plow	Apr. 17,1877	565	175	11	649
196,015	Hodge, Otis J., North Adams, Mass. Grate-bar	Oct. 9,1877	337	96	12	617
197,219	Hodge, Thomas B., Providence, R. I. Bouquet-holder	Nov. 20,1877	526	155	12	852
194,240	Hodgen, Samuel P., Nebsho, Mo. Egg-carrier	Aug. 14,1877	469	142	12	304
187,276	Hodges, Addison S., Hyde Park, assignor to J. A. Bubier, Boston, Mass. Sink guard and cover	Feb. 13,1877	357	113	11	263
	Hodges, Andrew J. (*See* Denton, Charles.)					
195,280	Hodges, John C., jr., Galveston, Tex. Bale-band tightener	Sept. 18,1877	556	162	12	494
193,954	Hodges, Matthew S., Lafayette, Wis. Windmill	Aug. 7,1877	153	47	12	255
	Hodges, O. F. (*See* Root, Datus N., assignor.)					
	Hodges, Pliny F., *et al.* (*See* Brown, James O., assignor.)					
189,221	Hodges, Pliny F., and F. S. Blim; said Blim assignor to said Hodges; said Hodges assignor of one-half interest to W. McClymonds, Massillon, Ohio. Grain-binder	Apr. 3,1877	186	64	11	584
186,563	Hodgins, Samuel, assignor of one-half interest to M. V. Barney, Saint Louis, Mo. Boot and gaiter strap	Jan. 23,1877	764	235	11	136
	Hodgkins, Henry C. (*See* Prindle, Osbert S., assignor.)					
191,855	Hodskinson, Jabez, Salem, Mass. Machine for splitting leather	June 12,1877	338	104	11	1026
187,383	Hodson, Marquis L., Camden, N. J., assignor of one-half interest to H. F. Scatchard and H. Hoffman, Philadelphia, Pa. Machine for cutting cloth	Feb. 13,1877	464	146	11	277
	Hoe & Co., R. (*See* Chester, William, assignor.)					
	Same.....(*See* Ford, Edward L., assignor.)					
	Same.....(*See* Weckerlin, Dominick, assignor.)					
192,510	Hoe, Richard M., and S. D. Tucker, New York, N. Y. Delivery apparatus for printing-machines	June 26,1877	1043	314, 315	11	1142
192,828	Hoe, Richard M., New York, N. Y. Billiard-register	July 10,1877	301	818	12	61
191,963	Hoehn, Ernest, Lawrence, Mass. Globe-valve or water-cock	June 12,1877	446	138	11	1040
194,911	Hoeltge, Frederick, assignor to self, W. Sellew, and W. S. Munson, Cincinnati, Ohio. Manufacture of sheet-metal elbows	Sept. 4,1877	151	47, 48	12	421
	Hoeppner, Friedrich. (*See* Guenther & Hoeppner.)					
	Hoerning, Matthew. (*See* Peltier & Hoerning.)					
195,281	Hofer, William L., Deposit, N. Y. Adding-machine	Sept. 18,1877	558	162	12	494
198,387	Hoff, Hans H., assignor to self and D. J. Donovan, Saint Louis Mo. Forge	Dec. 18,1877	705	214	12	1063
196,899	Hoffacker, John, English Lake, assignor of one-half interest to L., C. H., and M. Knopf, Richmond, Ind. Combined plow, harrow, and seeder	Nov. 6,1877	169	49	12	784
	Hoffheines, Reuben. (*See* Hunsberger, Jonathan, assignor) (Reissue.)					
196,453	Hoffman, Alice J., Richmond, Ind. Baking-pan	Oct. 23,1877	801	231	12	698
190,139	Hoffman, Austin D., assignor to J. E. Whittlesey and J. W. C. Peters, Chicago, Ill. Wire-coiling machine	May 1,1877	25	7	11	750
197,369	Hoffman, Daniel, Philadelphia, Pa. Tripod-head for surveying instruments	Nov. 20,1877	674	201	12	875
198,460	Hoffman, Frank G., Springfield, Ill. Pantaloons-protector	Dec. 25,1877	789	240	12	1085
	Hoffman, George W. (*See* Richmond, Elkanah D., assignor.)					
	Hoffman, Hiram, *et al.* (*See* Hodson, Marquis L., assignor.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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192,917	Hoffman, Jacob R., Fort Wayne, Ind. Band-saw mill	July 10, 1877	380	113	12	72
	Hoffman, James H. (*See* Spofford, Charles, assignor.)					
192,916	Hoffman, John, Toledo, Ohio. Beer-cask	July 10, 1877	380	112	12	72
195,016	Same....Street-sprinkler	Oct. 9, 1877	338	96	12	617
188,244	Hoffman, John J., and C. F. Pommer, Saint Louis, Mo. Car-coupling	Mar. 13, 1877	290	91	11	425
191,143	Hoffman, John W., Newton Falls, Ohio. Cockeye and tiaco clip	May 22, 1877	1065	319	11	909
193,249	Hoffman, Julia J., Garnett, Kans. Dish-washer	July 17, 1877	717	219	12	125
188,136	Hoffman, Charles, New York, N. Y. Theater-curtain	Mar. 6, 1877	168	51, 52	11	403
	Hofmann, Ottokar. (*See* Guido & Hofmann.)					
195,009	Hofmann, Peter A., Philadelphia, Pa. Knife and fork scourer	Sept. 11, 1877	261	80	12	444
	Hoffmeister, David, *et al.* (*See* Bowen, John T., assignor.)					
188,635	Hoffmeister, Louis C., assignor of one-half interest to H. M. Beidler, Philadelphia, Pa. Toy money-box	Mar. 20, 1877	676	208	11	487
196,017	Hoffstaetter, Ernst, New York, N. Y. Caster for furniture	Oct. 9, 1877	338	96	12	617
189,860	Hogan, Matthew, Hartford, Conn. Draft-faucet	Apr. 24, 1877	886	271	11	698
197,274	Hogeboom, Levi S., Three Rivers, Mich. Millstone-dresser	Nov. 20, 1877	577	170, 171	12	859
191,343	Hogeland, Israel, assignor of one-half interest to D. G. Williams, Indianapolis, Ind. Burglar-alarm	May 29, 1877	1206	382	11	946
198,242	Hogeland, Israel, assignor of one-half interest to J. R. Maiot, Indianapolis, Ind. Washing-machine	Dec. 18, 1877	577	174	12	1044
187,385	Hogen, Andrew C., Cleveland, Ohio. Elbow for stove-pipes, &c	Feb. 13, 1877	466	146	11	277
	Hogen Elbow Company. (*See* House, Mark W., assignor.)					
197,633	Hoghton, Charles M., Delavan, Ill. Check-rower	Nov. 27, 1877	962	286	12	925
198,514	Same....Marker for corn-planters	Dec. 25, 1877	844	257	12	1092
195,369	Hogue, Jacob A., assignor to Cincinnati Coffin Company, Cincinnati, Ohio. Coffin	Sept. 18, 1877	634	188	12	505
186,676	Hohenstein, John G., Gowanda, N. Y. Carriage-painters' easel	Jan. 30, 1877	879	272	11	161
187,853	Hojer, Thomas G., New York, N. Y. Umbrella-tip cap	Feb. 27, 1877	956	297	11	357
189,460	Same....Umbrella-runner	Apr. 10, 1877	452	142	11	625
192,119	Same....Umbrella	June 19, 1877	625	190	11	1076
192,867	Holbrook, Albert, Providence, R. I. Mallet	July 10, 1877	336	99	12	66
193,656	Same....Rawhide waste-can	July 31, 1877	1168	349	12	204
196,528	Holbrook, Benjamin F., Wakefield, Mass. Cooking-stove	Oct. 30, 1877	902	261	12	723
193,514	Holbrook, Walter A., Milwaukee, Wis. Grate-back	July 24, 1877	996	301	12	171
	Holcomb, Almond V., *et al.* (*See* Bacon, Jerome, assignor.)					
189,040	Holcroft, Richard, Philadelphia, Pa. Sash-holder	Apr. 3, 1877	28	9	11	562
	Holden, Charles W., *et al.* (*See* Ethridge, Martin V. B., assignor.)					
188,137	Holden, Daniel L., Covington, Ky. Pneumatic pump for refrigerating apparatus, &c	Mar. 6, 1877	170	52	11	403
190,036	Same....Ice-machine	Apr. 24, 1877	1068	325	11	722
	Holden, Luther L. (*See* Rogers, Edward F., assignor)	(Reissue.)				
195,131	Holden, Nicholas, San José, Cal. Windmill	Sept. 11, 1877	390	117	12	463
	Holden, William F. (*See* Rhodes & Holden.)					
197,370	Holder, Ella M., Lynn, Mass. Piano-pedal attachment	Nov. 20, 1877	675	201	12	875
195,818	Holderman, Jacob G., Indianapolis, Ind. Millstone-dresser	Oct. 2, 1877	125	36	12	579
190,588	Holding, Williams S., San Francisco, Cal. Envelope	May 8, 1877	486	145	11	818
	Holister, W. W., *et al.* (*See* Milne, Robert D., assignor.)					
191,144	Holland, Charles, Chicago, Ill. Hydrocarbon-burner and gas-generator	May 22, 1877	1066	319	11	910
	Holland, Rosa. (*See* Reed, Hoagland & Newsom, assignors)	(Reissue.)				
187,709	Hollen, Joseph and W. H. H., Hostoria, Pa. Stump-extractor	Feb. 27, 1877	811	252	11	338
	Hollen, William H. H. (*See* Hollen, Joseph and W. H. H.)					
191,761	Holley, Eli K., Lockport, assignor of one-half interest to J. B. Holley, Salem, N. Y. Carriage-wrench	June 12, 1877	243	77	11	1014
	Holley, John B. (*See* Holley, Eli K., assignor.)					
	Holliday, William P. (*See* Underwood & Holliday.)					
196,900	Hollingsworth, Harvey M., Clinton, Tenn. Stirrup	Nov. 6, 1877	170	49	12	784
188,907	Hollingsworth, James, Chicago, Ill. Horse hay-rake	Mar. 27, 1877	965	294, 295	11	535
192,625	Hollingsworth, Joseph, Jonesborough, Ind. Nut-lock	July 3, 1877	71	21	12	22
195,606	Hollingsworth, Joseph, and W. W. Walcott, Rockdale County, Ga. Bee-hive	Sept. 25, 1877	874	260	12	548
188,295	Hollingsworth, Loftus, Scotch Plains, N. J., assignor to Harper, Hollingsworth & Darby, New York, N. Y. Machine for separating fur from pelts and hides	Mar. 13, 1877	337	106	11	431
	Hollington, William. (*See* Earle, Ethan A., assignor.)					
193,817	Hollister, John F., Plano, Ill. Grain-binder	Aug. 7, 1877	21	7	12	237
	Hollon, Neill. (*See* Horton, John C., assignor.)					
	Holloway, Charles T. (*See* Stineman & Holloway.)					
190,037	Holloway, Charles T., and W. H. H. Stineman, assignors to D. H. Flack, Baltimore, Md. Lamp	Apr. 24, 1877	1070	326	11	722
191,964	Holloway, Charles T., Baltimore, Md. Hose nozzle or pipe	June 12, 1877	446	138	11	1040
193,955	Same....Fire-extinguisher	Aug. 7, 1877	153	47	12	256
195,370	Same.... same	Sept. 18, 1877	634	188	12	506
193,085	Holly, Birdsill, Lockport, N. Y. Steam-generator for warming buildings, &c	July 17, 1877	549	166	12	103
193,086	Same....Apparatus for utilizing steam in heating, &c	July 17, 1877	551	166, 167, 168	12	103
193,087	Same....Meter-valve of apparatus for warming dwellings, &c	July 17, 1877	561	168	12	104
193,088	Same....Street main or pipe for supplying large districts with heat for warming buildings	July 17, 1877	562	169	12	104
	Holly, James H. (*See* Krapp, James W., assignor.)					
	Holly, Sidney B., *et al.* (*See* Jones, John, assignor.)					
191,428	Holman, Calvin J., Toledo, Ohio. Vehicle spring	May 29, 1877	1341	406	11	955
	Holman, David O. (*See* Lewis & Holman.)					
	Holman, James H. (*See* Albright, James H., assignor.)					
	Holmes, Albert. (*See* Barber, Nathan, assignor.)					
191,238	Holmes, Barrack D., Bucyrus, Ohio. Turbine water-wheel	May 29, 1877	1175	352	11	933
	Holmes, Booth & Hayden. (*See* Blakeslee, Edward C., assignor.)					
	Holmes, Britain, *et al.* (*See* Bayley, William, assignor.)					
	Holmes, Britain. (*See* Holmes, Edward and B.)					
	Holmes, Charles E. L. (*See* Lawrence & Holmes.)					
185,920	Holmes, Charles E. L., New York, N. Y. Curry-comb	Jan. 2, 1877	110	33	11	22
186,475	Same Stove-platform	Jan. 23, 1877	685	210	11	125
188,294	Same Curry-comb	Mar. 13, 1877	336	105	11	431
189,559	Same Bath-tub	Apr. 17, 1877	566	176	11	649
194,820	Same Curry-comb	Sept. 4, 1877	66	22	12	409

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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188,306	Holmes, Daniel M., New York, N. Y., assignor to J. C. Fuller, Orange, N. J., and M. G. Holmes, New York, N. Y. Cake-machine	Mar. 13, 1877	409	127	11	441
192,166	Holmes, Daniel M., assignor to Van Derveer & Holmes Biscuit Company, New York, N. Y. Device for coating cakes with cocoa-nut, &c	June 19, 1877	671	205	11	1082
	Holmes, Edward, *et al.* (*See* Bayley, William, assignor.)					
188,365	Holmes, Edward and B., Buffalo, N. Y. Machine for leveling and trussing barrels	Mar. 13, 1877	408	127	11	441
197,972	Same.....Machine for bending hoops	Dec. 11, 1877	275	84	12	994
	Holmes, E. S. (*See* Oliver, Henry L., assignor.)					
	Holmes, Frederick A. (*See* Williams, George, assignor.)					
197,634	Holmes, Fred L., Boston, Mass. Stove and furnace grate	Nov. 27, 1877	962	286 287	12	925
187,852	Holmes, George W., Council Bluffs, Iowa. Pump	Feb. 27, 1877	955	296	11	357
196,454	Holmes, Helen V., Chicago, Ill. Compound for rendering photographic paper translucent	Oct. 23, 1877	801		12	698
	Holmes, Henry G. (*See* Stevens, Frank M., assignor.)					
	Same.....same.....(Reissue.)					
188,015	Holmes, Hiram C., assignor to self and L. W. Hall, Boston, Mass. Overbesom	Mar. 6, 1877	57	17	11	388
188,636	Holmes, Horace H., assignor of one-half interest to S. A. Manwaring, Elmira, N. Y. Furniture-spring	Mar. 20, 1877	677	209	11	487
	Holmes, Horatio L. (*See* Hardenbergh & Holmes.)					
	Holmes, Howard C. (*See* Bogert & Holmes.)					
	Holmes, Isaac H. (*See* Birch, Joseph W., assignor.)					
	Holmes, Joseph A., *et al.* (*See* Palmer, Aaron, assignor.)					
	Holmes, Martha G., *et al.* (*See* Holmes, Daniel M., assignor.)					
189,560	Holmes, Nelson, Ypsilanti, Mich. Sash-cord fastener	Apr. 17, 1877	567	176	11	649
188,014	Holmes, Thomas, Brooklyn N. Y. Preserving dead bodies	Mar. 6, 1877	57	16	11	388
190,322	Holmes, Thomas J., sr., Mason City, Ill. Harrow	May 1, 1877	205	61	11	773
	Holmwood, James, jr. (*See* Sibley, Holmwood & Luckenbach.)					
196,119	Holt, Elizabeth, Pittsburg, Pa. Packing for piston-rods, &c	Oct. 16, 1877	463	135	12	642
196,901	Holt, Francis, Newark, N. J. Lamp-burner	Nov. 6, 1877	171	50	12	784
197,935	Holt, Henry H., Kalama, Washington Ter. Book for carrying fishing-flies	Dec. 11, 1877	236	72	12	988
	Holt, J. C. (*See* Seitz, Philip, assignor.)					
186,008	Holt, Noah W., Dayton, Ohio. Rotary engine	Jan. 9, 1877	199	61	11	44
196,018	Holton, Thomas J., Philadelphia, Pa. Sewing-machine shuttle	Oct. 9, 1877	339	96	12	617
191,856	Holton, William J., and J. E. Field, Milwaukee, Wis Paint-pencil or crayon	June 12, 1877	341	105	11	1026
	Homan, George W. (*See* Homan, Henry L. and G. W.)					
197,553	Homan, Henry L. and G. W., Easton, Mo. Horseshoe	Nov. 27, 1877	880	262	12	913
194,039	Homann, Louis, Cincinnati, Ohio. Striping implement for painters' use	Aug. 14, 1877	260	77	12	276
194,912	Same.....Striping tool for paints	Sept. 4, 1877	153	48	12	421
	Homogeneous Metal Manufacturing Company. (*See* Young, Solomon N., assignor.)					
	Honoré, Benjamin L., *et al.* (*See* Shaw, William, assignor.)					
	Honoré, Francis L., *et al.* (*See* Shaw, William, assignor.)					
193,956	Hood, Alexander J., Fennimore Centre, Wis. Motor for light machinery	Aug. 7, 1877	154	48	12	256
189,735	Hood, John, and S. H. Reynolds, Boston, Mass. Dental-foil condenser	Apr. 17, 1877	742	228	11	671
187,228	Hood, Joseph R., Wedowee, Ala. Hoe	Feb. 13, 1877	309	101	11	256
189,222	Hook, George W., Towsontown, Md. Ironing-table	Apr. 3, 1877	188	64	11	584
	Hooker, Thomas. (*See* Richardson, Julius C., assignor.)					
198,023	Hooper, George W., Greene, Me. Double-acting force-pump	Dec. 11, 1877	320	99	12	1001
196,019	Hooper, James H. S., Dulwich, England. Rocket	Oct. 9, 1877	340	97	12	617
185,921	Hooper, William, Ticonderoga, N. Y., assignor to New York Ore Separator Company. Tossing-tub for separating ores	Jan. 2, 1877	111	33	11	22
189,734	Hooper, William, Ticonderoga, N. Y. Ore-separator	Apr. 17, 1877	739	227 228	11	671
190,323	Hooper, William, Ticonderoga, N. Y., assignor to New York Ore Separator Company. Wet-ore separator	May 1, 1877	206	61 62	11	773
190,324	Same.....Trough-jig	May 1, 1877	207	62	11	773
190,325	Same.....Separating sludge from iron-ores	May 1, 1877	208		11	773
190,326	Same.....Apparatus for crushing, grinding, and separating ore	May 1, 1877	209	62	11	773
196,455	Same.....Dust-traps for ore-separators	Oct. 23, 1877	802	231	12	698
	Hoople, Edmund. (*See* Sherwin & Hoople.)					
187,855	Hoos, Charles, Arago, Nebr. Grasshopper-killer	Feb. 27, 1877	957	297	11	358
187,759	Hoover, Isaac, Webster, Ohio. Earth-auger	Feb. 27, 1877	858	267	11	345
192,696	Hoover, John, Crawfordsville, Ind. Combined cut-off and filter	July 3, 1877	148	41	12	33
196,149	Hope, John, Providence, R. I. Calico-printing roller	Oct. 16, 1877	492	143	12	646
	Hopedale Machine Company. (*See* Bancroft, William, assignor.)					
192,997	Hopfen, Anton, New York, N. Y. Combined soap and shaving box	July 10, 1877	453	127	12	83
195,132	Hopfensack, Henry, New York, N. Y. Handle-fastening for pocket-books	Sept. 11, 1877	391	117	12	463
	Höpken, Lüder. (*See* Westermann & Mursch, assignors.)					
194,032	Höpken, Luder, San Francisco, Cal. Cut-off slide for cube-sugar machines	Aug. 14, 1877	312	92	12	283
	Hopkins & Burrows. (*See* Burrows, William T., assignor.)					
	Hopkins & Dickinson Manufacturing Company. (*See* Winkel, William, assignor.)					
186,564	Hopkins, Caleb, Waltham, Mass. Treacle	Jan. 23, 1877	765	236	11	136
193,009	Same.....Slide-rest for watch-makers' lathes	July 31, 1877	1109	333	12	197
196,228	Same.....Watch-makers' lathe	Oct. 16, 1877	570	165	12	657
188,908	Hopkins, Charles B., and J. A. Johnston, Topeka, Kans. Window-shutter	Mar. 27, 1877	967	295	11	535
189,736	Hopkins, Charles B., Topeka, Kans. Saw-set	Apr. 17, 1877	743	228	11	671
189,737	Same.....Shade for try-squares	Apr. 17, 1877	744	228	11	671
193,818	Hopkins, David A., Park Ridge, N. J. Device for lining journal-boxes	Aug. 7, 1877	23	8	12	237
187,854	Hopkins, Edmund S., assignor to Enos Car Coupler Company, Davenport, Iowa. Car-coupling	Feb. 27, 1877	956	297	11	357
187,856	Same.....same	Feb. 27, 1877	958	297	11	358
197,470	Hopkins, Edwin, Milford, Del. Fruit-crate	Nov. 27, 1877	789	236	12	900
193,872	Hopkins, Frank, Helena, Montana Ter. Whip	Aug. 7, 1877	69	22	12	244
188,637	Hopkins, George M., assignor to self and C. L. Topliff, Brooklyn, N. Y. Coin-tester	Mar. 20, 1877	678	209	11	487
194,775	Hopkins, George M., Brooklyn, N. Y. Regulator for controlling the flow of gas to furnaces	Sept. 4, 1877	21	6	12	403
	Hopkins, Harvey L. (*See* Edgarton, William W., assignor.)					
	Same.....(*See* Wells, Harrison and H. L., assignors.)					
190,860	Hopkins, Harvey L., Manchester, Iowa. Pitman	May 15, 1877	770	229	11	863
191,678	Same.....Finger-bar for harvesters	June 5, 1877	160	49	11	998
192,998	Same.....Track-clearer for harvesters	July 10, 1877	451	137	12	83
193,250	Same.....Mower	July 17, 1877	717	220	12	125
193,448	Same.....Mowing-machine	July 24, 1877	932	283	12	163

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Hopkins, Henry S. (*See* Rnick, Thomas, assignor.)					
	Hopkins, Henry S., *et al.* (*See* Singleton, Benjamin R., assignor).....(Reissue.)					
186,838	Hopkins, Jason R., Washington, D. C., assignor to W. B. Fowle, Auburndale, Mass. Watch	Jan. 30, 1877	1041	321, 322	11	182
	Hopkins, Jesse P. (*See* Powlett, James A., assignor.)					
191,239	Hopkins, John H., Reynoldsville, Pa. Scroll-sawing machine	May 29, 1877	1176	353	11	933
187,630	Hopkins, John T., and M. H. Smith, Fort Madison, Iowa. Feather-renovator	Feb. 20, 1877	717	222	11	317
194,433	Hopkins, Sylvanus C., Boston, Mass. Folding chair	Aug. 21, 1877	676	202	12	338
196,978	Hopkins, Taylor H., Pittsburg, Pa. Stuffing-box for steam-engines	Nov. 13, 1877	258	77	12	805
	Hopkins, William S. (*See* Zottman, John H., assignor.)					
186,131	Hopper, Garret D., and W. H. Lanfkotter, Sacramento, Cal. Pump-valve	Jan. 9, 1877	315	96	11	58, 59
	Hopper, George H. (*See* Deering, Mark L., assignor.)					
191,857	Hopper, John R., Rochester, N. Y. Combined snap-hook and buckle	June 12, 1877	341	165	11	1026
189,738	Hopping, Eugene C., assignor of one-half interest to E. A. Ely, Madison, N. J. Mechanical movement	Apr. 17, 1877	745	229	11	671
195,371	Horisk, William, Philadelphia, Pa. Horse-blanket	Sept. 18, 1877	635	189	12	503
	Hormann, Ferdinand. (*See* Rohrbacher & Hormann.)					
195,282	Horn, Christian, Philadelphia, Pa. Furniture-caster	Sept. 18, 1877	559	163	12	494
	Horn, Ferdinand. (*See* Wagoner & Horn.)					
193,957	Horn, John W., Eden's Ridge, Tenn. Washing-machine	Aug. 7, 1877	155	48	12	256
191,530	Hornbostel, Charles, assignor to E. Hornbostel, Brooklyn, N. Y. Applying oxygenated air in blast-furnaces	June 5, 1877	23		11	979
	Hornbostel, Edward. (*See* Hornbostel, Charles, assignor.)					
	Horne, Walter J. (*See* Tyer & Horne.)					
194,821	Horne, William Y., Saint Paul, Minn. Oil-can	Sept. 4, 1877	67	22	12	410
7,536	Horner, Edwin J., Wilmington, Del., assignor to C. Scott and G. F. Godley. Car-spring.....(Reissue)	Feb. 27, 1877	1062	327, 328	11	371
7,537	Same.....Car-spring.....(Reissue)	Feb. 27, 1877	1062	328	11	371
194,688	Hornfager, William, assignor to H. W. Putman, Brooklyn, N. Y. Bottle-stopper	Aug. 14, 1877	309	91	12	283
191,145	Hornig, Julius L., Jersey City, N. J. Velocipede	May 22, 1877	1067	319	11	910
195,819	Horning, Robert A., Karns City, Pa. Gate	Oct. 2, 1877	126	36	12	579
	Hornum Patent Fare Register Manufacturing Company. (*See* Hornum, William H., assignor).....(Reissue.)					
	Hornum Patent Register Manufacturing Company. (*See* Hornum, William H., assignor.)					
	Same.....same.....(Reissue)					
7,554	Hornum, William H., assignor, by mesne assignments, to Hornum Patent Fare Register Manufacturing Company, New York, N. Y. Fare-register.....(Reissue)	Mar. 13, 1877	507	157	11	455
8,013	Hornum, William H., New York, N. Y., assignor, by mesne assignments, to Hornum Patent Register Manufacturing Company. Fare-register. (Reissue)	Dec. 25, 1877	1065	324	12	1124
8,014	Same.....same.....(Reissue)	Dec. 25, 1877	1067	324	12	1124
187,632	Hornum, William H., assignor to Hornum Patent Register Manufacturing Company, New York, N. Y. Fare-register	Feb. 20, 1877	718	222, 223	11	317
193,958	Same.....same	Aug. 7, 1877	156	48	12	256
194,913	Hornum, William H., New York, N. Y. Fare-register	Sept. 4, 1877	153	48, 49	12	421
198,618	Horrie, David, assignor to self and J. H. Wheeler, Keokuk, Iowa. Railway cross-tie	Dec. 25, 1877	940	287	12	1107
	Horrocks, Henry. (*See* Baxter & Horrocks.)					
188,245	Horsford, Eben N., Cambridge, Mass. Cooking apparatus	Mar. 13, 1877	291	91	11	425
187,137	Horton, Charles H., Rochester Depot, Ohio. Grain-register	Feb. 6, 1877	209	68	11	231
186,930	Horton, Emmet, assignor of two-thirds interest to A. Whitney and J. Johnson, Hartford, Conn. Grain-binder	Feb. 6, 1877	10	3, 4, 5, 6	11	204
186,931	Same.....same	Feb. 6, 1877	15	6, 7, 8	11	204
186,932	Same.....same	Feb. 6, 1877	19	8, 9	11	204
190,589	Horton, Henry B., Ithaca, N. Y. Machine for printing and embellishing lead-pencils.	May 8, 1877	487	145	11	818
196,529	Same.....Automatic musical instrument	Oct. 30, 1877	902	261	12	723
191,344	Horton, James S., Jamestown, N. Y. Sleeve-button and stud	May 29, 1877	1266	382	11	946
195,215	Horton, John C., assignor of one-half interest to N. Hollon, Elkton, Tenn. Water-wheel	Sept. 18, 1877	488	144	12	485
190,327	Horton, Ransom J., Massena, N. Y. Grain-separator	May 1, 1877	209	62, 63	11	773
	Hosford, William B. (*See* Austin & Hosford.)					
191,345	Hoshall, David W., Dallas, Tex. Target for shooting-galleries	May 29, 1877	1267	382	11	946
7,824	Hoskin, Robert, Cranford, N. J., assignor to I. N. Hebberd, New York, N. Y. Roller for drying floor-cloths.....(Reissue)	July 31, 1877	1307	392	12	225
	Hosmer, James S. (*See* Palmateer, William A., assignor.)					
189,895	Hosmer, Oren S., Boston, Mass. Drilling mechanism	Apr. 24, 1877	925	282	11	703
191,429	Same.....Horse-hitching device	May 29, 1877	1342	407	11	956
193,871	Hotchkiss, Arthur E., Cheshire, Conn. Mechanical movement	Aug. 7, 1877	63	22	12	244
7,881	Hotchkiss, Benjamin B., New York, N. Y. Machine or battery gun.....(Reissue)	Sept. 11, 1877	466	139, 140	12	474
186,565	Same.....Wheel-brake	Jan. 23, 1877	765	236	11	136, 137
186,566	Same.....Combined screw-driver and band for fire-arms	Jan. 23, 1877	767	236	11	137
189,358	Same.....Shell	Apr. 10, 1877	354	114	11	613
190,861	Same.....Percussion-fuse	May 15, 1877	771	229	11	863
191,430	Same.....Metallic cartridge	May 29, 1877	1343	407	11	956
192,829	Same.....Rifle-bullet	July 10, 1877	301	88	12	61
192,830	Same.....Gun-carriage	July 10, 1877	302	88	12	61
193,657	Same.....Projectile	July 31, 1877	1168	350	12	205
193,658	Same.....Cartridge for fire-arms	July 31, 1877	1169	350	12	205
192,918	Hotchkiss, Charles A., Bridgeport, Conn. Curry-comb	July 10, 1877	382	113	12	72
193,251	Same.....same	July 17, 1877	718	220	12	125
190,140	Hotchkiss, Ephraim C., Buffalo, and C. W. Hebard, Rochester, N. Y. Ironing-table	May 1, 1877	26	7	11	750
195,283	Hotchkiss, Ephraim C., Buffalo, N. Y. Ironing-table	Sept. 18, 1877	559	163	12	494
193,252	Hotchkiss, Henry G., New Haven, Conn. Machine for milling, pointing, and shouldering keys	July 17, 1877	720	220	12	125
	Hotchkiss, James F. (*See* Kemp, Thomas O., assignor).....(Reissue.)					
	Hotchkiss, T. Dwight. (*See* Barber, Silas, assignor.)					
190,491	Hotchkiss, Walter S., Southington, Conn. Spool-stand	May 8, 1877	395	115	11	806
	Hotchkiss, William H. (*See* Pegram & Hotchkiss.)					
195,892	Hotchkiss, William H., and W. D. Pegram, Moberly, Mo. Railway-car fire-extinguisher	Oct. 9, 1877	212	60	12	599
196,067	Hotham, Edmond S., Potsdam, N. Y. Portable fence	Oct. 30, 1877	1034	300	12	741

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Drg.	Vol.	Page.
193,335	Houchens, Leonidas R., Falls Church, Va. Combined drum and stove	July 24, 1877	825	253	12	148
185,922	Houdaille, Georges, Paris, France. Machinery for raising from mines	Jan. 2, 1877	112	34	11	23
	Hough, Charles F. (*See* Whiton, Thomas & Hough.)					
	Hough, Charles N. (*See* Wiard & Hough.)					
190,038	Hough, Joseph, Buckingham, Pa. Turbine water-wheel	Apr. 24, 1877	1071	326	11	722
189,223	Houghtaling, William, and E. Switer, Bridgeport, Conn. Cam-motion	Apr. 3, 1877	189	64	11	584
187,631	Houghton, Charles F., Corning, N. Y. Semaphore lens	Feb. 20, 1877	717	222	11	317
193,659	Houghton, Chilon, Arlington, Mass. Car-seat	July 31, 1877	1170	350	12	205
197,471	Houghton, George S., Columbus, Wis. Flood-gate	Nov. 27, 1877	790	226	12	901
186,567	Houghton, Henry, assignor to J. Thornton & Co., New York, N. Y. Show-case	Jan. 23, 1877	768	236	11	137
198,111	Houghton, Henry S., Smithville, Mass. Stop-motion for drawing-frames	Dec. 11, 1877	407	127	12	1014
198,112	Same same	Dec. 11, 1877	408	127	12	1014
	Houghton, Herbert R. (*See* Sisum, William H. H., assignor.)					
189,937	Houghton, Jesse F., assignor to S. D. Balkam, Boston, Mass. Oven-rack	Apr. 24, 1877	963	294	11	769
194,040	Houghton, Stillman, Worcester, Mass. Napkin-supporter	Aug. 14, 1877	261	77	12	277
	Houghton, William. (*See* Reinhart & Houghton.)					
	Hoult, John C. (*See* Rice & Hoult.)					
196,902	Houpt, John, Springtown, Pa. Compound condensing apparatus for steam-engines	Nov. 6, 1877	172	50	12	784
187,857	Houriet, Jules, Terre Haute, Ind. Sash-balance	Feb. 27, 1877	960	298	11	358
	House, Charles A. (*See* Palmer, Lewis A., assignor.)					
191,431	House, Christopher G., Aurora, Ill. Animal-releasing device	May 29, 1877	1344	407	11	956
192,333	House, Elijah S., assignor to Strahan, Hodgson & Co., Troy, N. Y. Cuff	June 26, 1877	873	264	11	1120
188,464	House, James A., Bridgeport, Conn. Mechanical movement	Mar. 20, 1877	518	160	11	465
188,465	Same same	Mar. 20, 1877	519	160	11	465
189,461	Same Scroll-saw	Apr. 10, 1877	452	142	11	625
190,141	Same Machine for manufacturing saws	May 1, 1877	26	7, 8	11	750
190,142	Same Manufacturing saw-blades	May 1, 1877	28	8, 9	11	750
198,729	House, Mark W., assignor to Hogen Elbow Company, Cleveland, Ohio. Machine for jointing sections of pipe	Dec. 25, 1877	1053	320, 321	12	1122
188,638	House, William H., Bennett's Cross-Roads, N. C. Horse-power	Mar. 20, 1877	678	209	11	487
197,853	Housel, Martin J., assignor of two-thirds interest to Hill Sewer Pipe Company, Akron, Ohio. Manufacture of earthenware vessels	Dec. 4, 1877	145	44	12	966
187,974	Houston, George A., Beloit, Wis. Grain-binder	Mar. 6, 1877	18	5	11	383
187,138	Houston, Levi, Montgomery, Pa. Tenoning-machine	Feb. 6, 1877	210	68	11	231
188,138	Houston, Robert P., Liverpool, England. Crank and crank-shaft	Mar. 6, 1877	171	52	11	403
194,066	Hover, Joseph E., Philadelphia, Pa., assignor to self and T. Shaw. Ink for canceling stamps	Sept. 11, 1877	220		12	438
195,372	Hovey, Asa E., assignor to Sutter Street Railroad Company, San Francisco, Cal. Endless-rope traction-railway	Sept. 18, 1877	636	189	12	506
196,297	Hovey, Caarles F., Springfield, Mass. Beer-cooling apparatus	Oct. 23, 1877	654	189	12	677
	Hovey, Douglas, *et al.* (*See* Burbank, Abner, assignor.)					
187,858	Hovey, Francis, New York, N. Y. Neck-tie holder	Feb. 27, 1877	960	298	11	358
	How, Moses. (*See* Keith, Thomas K., assignor.)					
196,754	How, Moses, Haverhill, Mass. Shoe	Nov. 6, 1877	18	5	12	763
190,143	Howard, Alonzo J. F., assignor to E. Mann, Milford, Mass. Leather crimping machine	May 1, 1877	32	9	11	750
187,278	Howard, Anson M., Ilion, N. Y. Type-machine	Feb. 13, 1877	358	114, 115	11	263
187,139	Howard, Byron S., New York, N. Y. Advertising	Feb. 6, 1877	211	69	11	232
186,839	Howard, Charles A., Pontiac, Mich. Heater attachment for lamps	Jan. 30, 1877	1043	322	11	183
188,909	Howard, Cornelius A., New Haven, Conn. Hose-nozzle	Mar. 27, 1877	967	295	11	535
	Howard, Cyrus B. (*See* Howard, Stanton M. and C. B.)					
	Howard, George. (*See* Thornton & Shallon, assignors.)					
193,959	Howard, Jerome B., Woonsocket, R. I. Vegetable and fruit slicer	Aug. 7, 1877	158	49	12	256
185,923	Howard, J. Irving, and C. D. Hayward, New York, N. Y. Pantaloon-protecter	Jan. 2, 1877	113	34	11	23
186,840	Howard, John C., Chicago, Ill. Tin can	Jan. 30, 1877	1014	322	11	183
194,822	Howard, Martin L., Clear Lake, Iowa. Windmill	Sept. 4, 1877	68	22	12	410
	Howard, Rufus L. (*See* Schlenker, Erhard, assignor) (Reissue.)					
191,802	Howard, Stanton M., assignor of one-fourth interest to W. G. Wilkinson, Wheeling, W. Va. Skylight	June 12, 1877	285	89	11	1019
196,456	Howard, Stanton M. and C. B., Wheeling, W. Va. Nail-assorter	Oct. 23, 1877	803	231	12	699
191,590	Howard, William H., assignor to self, J. F. Lacey, and J. H. Roberts, Albany, Wis. Feed-rack	June 5, 1877	74	22	11	986
187,277	Howe, Benjamin J. C., Syracuse, N. Y. Bag-holder	Feb. 13, 1877	358	114	11	263
187,531	Same Pump	Feb. 20, 1877	623	193	11	305
192,649	Howe, Frank L., Medfield, Mass. Revenue-guard for cigar-boxes and other packages	July 3, 1877	99	29	12	25
	Howe, Henry W. (*See* Jones, James M., assignor)					
190,434	Howe, J. Milton, San Francisco, Cal. Type-distributing machine	May 8, 1877	337	99	11	799
	Howe, Samuel E., *et al.* (*See* Terman, James W., assignor.)					
	Howe, Thomas J. (*See* Lowth, Howe & Labare.)					
	Howell, Albert L. (*See* Read & Howell.)					
190,217	Howell, John, Benton, Cal. Revolving ore-roaster	May 1, 1877	103	30	11	760
187,859	Howell, John E., Eldorado, Mo. Vehicle-wheel	Feb. 27, 1877	961	298	11	358
197,371	Howell, Josiah, McKeespert, Pa. Ironing-board	Nov. 20, 1877	676	202	12	875
194,914	Howell, Martin A., jr., Streator, Ill. Egg-carrier	Sept. 4, 1877	156	49	12	422
188,799	Howell, William G., Troy, N. Y. Manufacture of axes	Mar. 27, 1877	860	262	11	520
	Howes, Babcock & Company. (*See* Booth, Jonathan L., assignor.)					
192,369	Howes, Frederick, Boston, Mass. Tellurian	June 26, 1877	909	273	11	1125
194,434	Howes, Sears B., West Dennis, Mass. Fishing-seine	Aug. 21, 1877	678	202	12	338
197,220	Howig, Frank H., assignor to self, F. B. H. Wing, and R. F. Radebaugh, San Francisco, Cal. Production of wooden bottle-stoppers and bungs	Nov. 20, 1877	526		12	852
	Howland & Co. (*See* Liddell, William, assignor.)					
	Howland, Arthur H. (*See* Kettell & Howland.)					
185,924	Howland, Ephraim, White Lake, and J. B. Sweetland, Pontiac, Mich. Wind-wheel	Jan. 2, 1877,	114	34	11	23
188,139	Howland, Ephraim, and J. B. Sweetland, Pontiac, Mich. Wind-wheel	Mar. 6, 1877	171	52	11	403
	House, Henry. (*See* Durham, Frederick W., assignor.)					
193,039	Houver, George, assignor of one-half interest to J. Clouser, Mansfield, Ill. Weather-strip	Apr. 24, 1877	1072	326	11	722
192,511	Hoxie, Edmund, Newburyport, Mass. Stop-cock	June 26, 1877	1047	315	11	1142
191,681	Hoxie, John W., Clintonville, Ill. Preparing an iron and steel cementation compound	June 5, 1877	162		11	998
	Hoyle, David P., *et al.* (*See* Dunlap & Magill, assignors.)					
196,903	Hoyman, Henry S., Stanwood, Iowa. Cultivator	Nov. 6, 1877	173	50	12	784
	Hoyt, Alberus W. (*See* Piggott & Hoyt.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Drg.	Vol.	Page.
198,388	Hoyt, Benjamin W., Manchester, N. H. Lath-holder	Dec. 18, 1877	706	214	12	1063
196,229	Hoyt, Ezra P., New York, N. Y. Vault cover and ventilator	Oct. 16, 1877	571	165	12	657
187,141	Hoyt, Frederick J., Batavia, N. Y. Sash-fastener	Feb. 6, 1877	213	69	11	232
192,919	Hoyt, Frederick J., New York, N. Y. Sash-fastener	July 10, 1877	382	113	12	72
188,016	Hoyt, Gabriel P. B., Brooklyn, N. Y. Binding books	Mar. 6, 1877	58	17	11	388
187,140	Hoyt, John W., Springfield, Mass. Fire-proof roofing	Feb. 6, 1877	212	69	11	232
187,142	Same.....Metallic-lathing	Feb. 6, 1877	213	69	11	232
195,607	Hoyt, John W., assignor of one-half interest to C. M. Dwight, Springfield, Mass. Roofing-tile	Sept. 25, 1877	875	260	12	548
197,781	Same.....Fire-proof floor	Dec. 4, 1877	78	24	12	957
186,476	Hoyt, Joseph M., Lynn, Mass. Bottle-stopper	Jan. 23, 1877	686	210	11	125
195,711	Hoyt, Otis, Springfield, Ill. Dust-band for watches	Oct. 2, 1877	21	6	12	564
187,860	Hoyt, Purdy B., Brooklyn, N. Y. Sheet for automatic musical instruments	Feb. 27, 1877	962	299	11	358
193,960	Hoyt, William A., Paris, Tex. Fire-escape and extension-ladder	Aug. 7, 1877	159	49	12	256
195,285	Same.....Combined awning and shutter	Sept. 18, 1877	562	163	12	495
195,284	Hoyt, William H., Batavia, N. Y. Register for freight car doors	Sept. 18, 1877	560	163	12	494
195,820	Hubbard, Albert W., and L. B. Eddy, Cleveland, Ohio. Timber-splice for bridges	Oct. 2, 1877	127	36	12	579
193,610	Hubbard, David G., East Bridgewater, Mass. Bottle-stopper	July 31, 1877	1110	333	12	198
188,140	Hubbard, Francis M., Nora Springs, Iowa. Spring-seat	Mar. 6, 1877	172	53	11	403
188,054	Hubbard, Lyman D., assignor to self and H. C. Brown, Hume, N. Y. Trace-buckle	Mar. 6, 1877	96	29	11	393
	Hubbard, Moses G. (*See* Gordon Myers, Telford & Hubbard.)					
188,367	Hubbard, Moses G., Minneapolis, Minn. Mowing-machine	Mar. 13, 1877	411	128	11	442
	Hubbard, S. A., *et al.* (*See* Chase, Henry A., assignor.)					
187,532	Hubbard, William W., Manchester, N. H. Belt-shifter	Feb. 20, 1877	623	193	11	305
190,328	Hubbard, William P., and J. W. Robinson, Farmland, Ind. Cultivator attachment	May 1, 1877	210	63	11	773
7,577	Hubbard, William W., Edinburg, Ind., assignor, by mesne assignments, to G. D., J. W., L. L., and M. Haworth, Decatur, Ill. Corn-planter (Reissue)	Mar. 27, 1877	1074	331	11	549
193,118	Hubbell, Algernon S., Norwich, Conn. Pen-holder	July 17, 1877	589	178	12	108
	Hubbell, George H., *et al.* (*See* Bradley, James J., assignor.)					
189,224	Hubbell, John E., New York, N. Y. Screen-holder for lamps	Apr. 3, 1877	189	65	11	584
186,477	Hubbell, Napoleon C., assignor to Hubbell Screw Company, New York, N. Y. Metal-screw machine	Jan. 23, 1877	687	211	11	137
	Hubbell Screw Company. (*See* Hubbell, Napoleon C., assignor.)					
188,910	Hubbell, Thomas J., Yountville, Cal. Trace-buckle	Mar. 27, 1877	968	295	11	535
189,225	Hubbell, Thomas J., Yountville, Cal., assignor of one-half interest to J. A. Boylan, Canaseraga, N. Y. Thill-coupling	Apr. 3, 1877	190	65	11	584
189,938	Same.....Grain-separator	Apr. 24, 1877	964	294, 295	11	709
195,928	Hubbell, William L., and F. Ochs, assignors to said Hubbell and A. Oechs, New York, N. Y. Match-safe	Oct. 9, 1877	251	71	12	604
187,384	Hubbell, William W., Philadelphia, Pa. Furnace-door for steam-boilers	Feb. 13, 1877	465	146	11	277
191,146	Same.....Metal alloy for commercial coin	May 22, 1877	1068		11	910
191,147	Same.....Furnace-door of locomotives	May 22, 1877	1068	320	11	910
187,279	Hubel, Frederick A., Detroit, Mich. Machine for cutting off gelatine capsules	Feb. 13, 1877	362	115	11	263
185,925	Huber, Edward, Marion, Ohio. Road-scraper	Jan. 2, 1877	114	35	11	23
194,435	Same.....Horse hay-rake	Aug. 21, 1877	679	202	12	338
195,216	Huber, Francis X., D. Lindauer, and A. J. Lercké, New York, N. Y. Life-boat and launching apparatus	Sept. 18, 1877	489	144	12	485
	Huber, Jacob. (*See* Grinnell, John M., assignor.)					
198,619	Huber, Jacob, assignor of one-half interest to J. M. Grinnell, Newark, N. J. Harness saddle-tree	Dec. 25, 1877	940	287	12	1107
186,346	Huber, John, and H. Snell, Girard, Ill. Combined hay-tedder and side rake	Jan. 16, 1877	543	164	11	94
194,302	Huber, Joseph H., Lancaster, Pa. Meat-chopper	Aug. 21, 1877	544	164	12	320
186,088	Huber, Samuel, Danville, Pa. Plow	Jan. 9, ——	274	83	11	53
	Hubert, René A. R. (*See* Dion, Charles, assignor.)					
190,040	Huck, Henry, Baltimore, Md. Leather for ornamentation	Apr. 24, 1877	1073	327	11	722
194,682	Hudgin, Robert H., Whitby, Canada. Gate	Aug. 28, 1877	918	273	12	381
187,280	Hudson, Andrew J., assignor of one-third interest to A. H. Gillett and one-third to J. A. Ricker, Syracuse, N. Y. Breech-loading fire-arm	Feb. 13, 1877	363	116	11	264
186,568	Hudson, George W., Pewee Valley, Ky. Car-coupling	Jan. 23, 1877	768	237	11	137
194,352	Hudson, Henry, Saltillo, Pa. Leather-rolling machine	Aug. 21, 1877	598	179	12	328
191,591	Hudson, John, Detroit, Mich. Hame attachment	June 5, 1877	74	22	11	986
192,261	Hudson, John L., Cumming, Ga. Tool-handle	June 19, 1877	777	236	11	1095
191,965	Hudson, Miller B., assignor of one half interest to H. F. Sterling, Canandaigua, N. Y. Bag-holder	June 12, 1877	447	138	11	1040
195,821	Hudson, Philip W., North Manchester, Conn. Paper-machine	Oct. 2, 1877	127	37	12	579
196,803	Hudson, William P., Cleveland, Ohio. Sash-fastener	Nov. 6, 1877	66	20	12	770
186,345	Hudson, William S., Paterson, N. J. Spark-arrester	Jan. 16, 1877	542	164	11	94
	Hudspith, Edward. (*See* Phillips, Thomas, assignor.)					
186,569	Huerta, Manuel, assignor of two-thirds interest to N. W. Chapman, Dalles, and V. Trevett, Portland, Oreg. Harness-buckle	Jan. 23, 1877	769	237	11	137
189,939	Huested, Henry G., Bridgeport, Conn. Coin-holder	Apr. 24, 1877	965	295	11	709
	Huey, Alexander G. (*See* Brown & Huey.)					
190,590	Huey, William, Federalsburg, Md. Making wooden boxes	May 8, 1877	488	145	11	818
	Huff, Harrison W. (*See* Long, John P., assignor.)					
	Huff, Henry D. (*See* Stevens, Charles H., assignor.)					
	Huff, Sanford W. (*See* Huffman & Huff.)					
	Huffman, Hugh B. (*See* Broom, Hugh, assignor.)					
197,372	Huffman, James, Mount Crawford, and J. Funkhouser, Keezletown, Va. Table-tongs	Nov. 20, 1877	677	202	12	875
	Huffman, Peter C., *et al.* (*See* Shurtz, John G., assignor.)					
186,570	Huffman, William C., Toledo, Ohio. Spring-supported stool	Jan. 23, 1877	770	237, 238	11	137
191,432	Huffman, William D., and S. W. Huff, Sigourney, Iowa. Pneumo-electric bath	May 29, 1877	1345	407, 408	11	956
8,003	Huggett, John A., Clapham, England. Machine for making horseshoe-nails (Reissue)	Dec. 18, 1877	770	232, 233	12	1073
198,543	Same.....Shears for cutting horseshoe nails	Dec. 25, 1877	868	264	12	1096
197,373	Huggins, Oliver B., Pittsburg, N. H. Pan for boiling soap	Nov. 20, 1877	677	202	12	875
191,803	Hughes, Alexander E., assignor, by mesne assignments, to North American Fire Annihilator Company, Philadelphia, Pa. Chemical fire-extinguisher	June 12, 1877	286	89	11	1020
	Hughes, Charles D. (*See* Lorenz & Hughes.)					
186,344	Hughes, David W., Saint Louis, Mo. Plow attachment	Jan. 16, 1877	541	164	11	94
	Hughes, Elen E. (*See* Thayer, Reuel H., assignor.)					
194,436	Hughes, George R., and J. E. Wall, Franklin, Tenn. Harrow and roller	Aug. 21, 1877	679	202	12	338

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Drgs.	Vol.	Page.
187,861	Hughes, James R., Saugus, Mass. Nutmeg-grater	Feb. 27, 1877	963	299	11	358
198,730	Same.....same	Dec. 25, 1877	1054	321	12	1122
7,472	Hughes, John, Buchanan, Pa. Lantern.....(Reissue)	Jan. 23, 1877	857	264	11	149
193,253	Hughes, John, New York, N. Y. Steam-boiler	July 17, 1877	723	220	12	126
194,091	Hughes, John T., Murrayville, Ill. Combined plow and corn-planter	Aug. 14, 1877	311	92	12	283
	Hughes, Joseph. (*See* Watkins, William J., assignor.)					
194,093	Hughes, Reuben B., assignor to W. and E. T. Fitch, New Haven, Conn. Vehicle-spring head	Aug. 14, 1877	313	92	12	284
195,449	Hughes, Samuel, Charleston, S. C. Bale-band-tightening machine	Sept. 25, 1877	725	214, 215	12	526
186,252	Hughes, Thomas N., Muddy Creek, Tenn. Animal-trap	Jan. 16, 1877	436	134	11	82
	Hughes, Washington L. (*See* Boda, William J., assignor.)					
186,572	Hughson, Jacob D., assignor to self and G. W. Hamilton, Prairie City, Ill. Electric railway-signal	Jan. 23, 1877	772	238, 239	11	137
192,868	Hugroo, Edmund, Chicago, Ill. Railway-switch	July 10, 1877	337	99	12	66
192,167	Huguenin, Edward, Philadelphia, Pa. Method of ornamenting metallic surfaces for jewelry	June 19, 1877	672	206	11	1082
193,763	Huguenin, Robert B., New York, N. Y. Horseshoe	July 31, 1877	1263	379	12	219
196,457	Same.....same	Oct. 23, 1877	801	232	12	699
196,804	Same..... Sash-holder	Nov. 6, 1877	66	20	12	770
	Hukill, Jackson. (*See* Bushway, Franklin C., assignor.)					
	Hulbert, Jerome B. (*See* Powers & Hulbert.)					
	Hulbert, J. R., *et al.* (*See* Powers, Titus, assignor.)					
187,975	Hulbert, William A., Brooklyn, N. Y. Revolving fire-arm	Mar. 6, 1877	21	5	11	383
	Hulet, Henry C., *et al.* (*See* Lynch, George B., assignor.)					
191,966	Hulet, Henry C., and J. D. Murphy, Darlington, Ind. Truck for moving buildings	June 12, 1877	448	139	11	1040
	Hulet, Walter F., *et al.* (*See* Lynch, George B., assignor.)					
	Hulings, George H. (*See* Atkins, George W., assignor.)					
195,712	Hull, Charles, Moseley, assignor to C. L. Oliver, London, England. Boot-jack	Oct. 2, 1877	22	6	12	561
7,555	Hull, Davit F., Hagerstown, Md., assignor to Hagerstown Agricultural Implement Manufacturing Company. Machine for sowing fertilizer. (Reissue)	Mar. 13, 1877	509	157	11	455
194,776	Same.....Machine for preparing corn-fodder	Sept. 4, 1877	22	6	12	403
190,041	Hull, Harvey, West Exeter, N. Y. Grain-binder	Apr. 24, 1877	1073	327	11	723
193,408	Hull, Herbert H., Cleveland, Ohio. Can for packing and shipping paints	July 24, 1877	894	273	12	157
194,151	Hull, James J., and William Raynor, Brooklyn, N. Y. Stringing pianos	Aug. 14, 1877	388	115	12	292
186,677	Hull, John S., Cincinnati, O. Heating device for soldering-irons, &c	Jan. 30, 1877	880	272	11	161
196,360	Hull, John S., Cincinnati, Ohio. Apparatus for supplying hydrocarbon oils to buildings	Oct. 23, 1877	716	206	12	686
7,561	Hull, Liverus, Charlestown, Mass., assignor, by mesne assignments, to Bradley & Hubbard Manufacturing Company and Meriden Malleable Iron Company, West Meriden, Conn. Extension-chandelier.....(Reissue)	Mar. 20, 1877	764	234	11	499
	Hull, Martin L. (*See* Prentiss, Charles H., assignor).....(Reissue.)					
196,120	Hull, Martin L., Cleveland, Ohio. Lamp-stove	Oct. 16, 1877	464	135	12	642
197,033	Hull, Maurice C., West Orange, N. J. Ventilator for chimneys, &c	Nov. 13, 1877	314	93	12	813
190,717	Hull, Nicholas A., assignor to Indiana Manufacturing Company, Peru, Ind. Table-leaf support	May 15, 1877	648	192	11	846
196,093	Hull, Nicholas A., assignor of one-half interest to C. B. Rathbun, Peru, Ind. Table-leg support	Oct. 16, 1877	420	125	12	637
196,458	Hull, Stephen, Poughkeepsie, N. Y. Harvester	Oct. 23, 1877	805	232	12	699
187,633	Hull, William S., Hinds County, Miss. Screw-propeller	Feb. 20, 1877	719	223	11	318
190,591	Same.....Toy aerostat	May 8, 1877	489	146	11	818
197,635	Hume, George H., Paola, Kans. Detaching apparatus for check-reins	Nov. 27, 1877	961	287	12	925
197,636	Hummel, Charles, and F. Padberg, New York, N. Y. Utilizing scrap leather	Nov. 27, 1877	964	287	12	925
194,683	Humphrey, Eugene, Boston, Mass. Ironing apparatus	Aug. 28, 1877	919	273	12	381
189,041	Humphrey, Henry P., Chelmsford, assignor of one-half interest to J. W. Bruce, Westford, Mass. Coupling for glass pipes	Apr. 3, 8877	28	9	11	562
191,286	Humphrey, James, Boston, Mass. Wheel and axle	May 29, 1877	1221	366	11	939
187,466	Humphreys, James W., Lafayette, Ind. Ditching-machine	Feb. 20, 1877	562	174	11	297
188,911	Humphreys, Samuel C., Indian Creek, W. Va. Water-wheel	Mar. 27, 1877	969	296	11	535
186,933	Humphreys, William F., Concord, Mo. Stove-refrigerator	Feb. 6, 1877	20	9	11	204
191,055	Humphry, Daniel W. G., Chelsea, Mass. Leaf-turner	May 22, 1877	983	292	11	898
185,926	Hunerwadel, Adolf, Washington, D. C. Mechanical movement	Jan. 2, 1877	115	35	11	23
190,858	Hungerford, Darius K., De Witt, Iowa. Horse-power	June 12, 1877	342	105	11	1026
197,851	Hunsaker, Archibald L., Hunsaker, Cal. Pump operated by springs or weights	Dec. 4, 1877	146	45	12	967
	Hunsaker, George T. (*See* Bartels, William H., assignor.)					
192,581	Hunsaker, George T., Carthage, Ill. Oil-can and package for carrying fluids	July 3, 1877	27	8	12	16
194,437	Same.....Hat-holder combined with seat	Aug. 21, 1877	680	203	12	338
7,745	Hunsberger, Jonathan, Montgomery County, assignor to R. Hoffheins, York, Pa. Horse-rake.....(Reissue)	June 12, 1877	550	168	11	1053
7,746	Same.....same.....(Reissue)	June 12, 1877	551	168	11	1054
190,144	Hunt, Augustus, Philadelphia, Pa. Ice-conveyer	May 1, 1877	33	10	11	751
	Hunt, A. W., *et al.* (*See* Graham, Miles G., assignor.)					
	Hunt, Charles F. (*See* Hunt, Walter and C. F.)					
191,433	Hunt, Charles F., Chicago, Ill. Steam boiler furnace	May 29, 1877	1346	408	11	956
	Hunt, Charles L. (*See* Salisbury & Hunt.)					
	Hunt, Charles P. (*See* Cornish & Hunt.)					
197,472	Hunt, Charles W., assignor to F. M. Hunt, West New Brighton, N. Y. Counter-shaft for driving machinery	Nov. 27, 1877	791	236	12	901
	Hunt, Dwight. (*See* Lowry & Hunt.)					
187,710	Hunt, E. Hamilton, Chicago, Ill. Hydraulic elevator	Feb. 27, 1877	812	252	11	339
187,711	Same.....same	Feb. 27, 1877	813	252, 253	11	339
	Hunt, F. B., *et al.* (*See* Slusser, Benjamin, assignor).....(Reissue.)					
	Hunt, Frances M. (*See* Hunt, Charles W., assignor.)					
	Hunt, Franklin B. (*See* Miller & Wright, assignors).....(Reissue.)					
187,862	Hunt, Frederic R., Leavenworth, Kans. Mail-bag	Feb. 27, 1877	964	299	11	358
189,861	Hunt, George G., Bristol, Ill. Barbed fence	Apr. 24, 1877	887	271	11	699
193,370	Same.....same	July 24, 1877	860	261	12	152
197,729	Same.....Barbed-fence wire	Dec. 4, 1877	21	7	12	949
187,635	Hunt, Harry, Boston, Mass. Hose nozzle	Feb. 20, 1877	721	223	11	318
198,389	Hunt, Howard, Twin Grove, Wis. Automatic wagon-brake	Dec. 18, 1877	707	215	12	1063
186,207	Hunt, John G., New York, N. Y. Apparatus for manufacturing gas	Jan. 16, 1877	399	122	11	77
189,462	Hunt, Reuben R., Lexington, Ky. Wagon-bed	Apr. 10, 1877	451	142, 143	11	625

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
187,386	Hunt, Robert W., and A. Wendel, Troy, N. Y. Manufacturing Bessemer steel	Feb. 13, 1877	467		11	277
187,143	Hunt, Simeon B., New York, assignor to A. W. Billings, Brooklyn, N. Y. Clothes-pin	Feb. 6, 1877	214	70	11	232
196,020	Hunt, Walter and C. F., Providence, R. I. Corset	Oct. 9, 1877	342	97	12	617
	Hunt, William D., *et al.* (*See* Maxson, John, assignor.)					
190,218	Hunter, Edward, Norwich, Conn. Garden-watering pot	May 1, 1877	103	30	11	760
198,620	Hunter, Frederick G., assignor of one-half interest to J. M. Reid, Moncton, New Brunswick. Hydraulic jack and press	Dec. 25, 1877	941	288	12	1107
191,967	Hunter, George, Elgin, Ill. Dust-cap for watches	June 12, 1877	449	139	11	1040
192,370	Hunter, George W., Washington, D. C. Lifting-jack	June 26, 1877	910	273	11	1125
193,254	Same.....Wash-board attachment	July 17, 1877	724	221	12	126
191,592	Hunter, James, assignor to self and J. E. Hunter, North Adams, Mass. Fulling-mill	June 5, 1877	75	23	11	986
	Hunter, James E. (See Hunter, James, assignor)					
196,805	Hunter, James M., Chenango Forks, N. Y. Wagon-tongue support	Nov. 6, 1877	68	20	12	770
192,434	Hunter, Jesse R., Orange Springs, Fla. Pruning implement	June 26, 1877	969	291	11	1133
	Hunter, John K. (*See* Patterson, Lemuel, assignor)					
	Hunter, Keller & Co. (*See* Gillespie, Richard S., assignor.)					
	Hunter, Marcus A., *et al.* (*See* Fields, Daniel G., assignor.)					
197,135	Hunting, George H., assignor to J. H. Furguson, New York, N. Y. Egg fork	Nov. 13, 1877	423	125	12	829
	Hunting, Leonard. (*See* French & Hunting.)					
187,634	Huntington, Alfred, and J. Hicks, Milwaukee, Wis. Grain-separator	Feb. 20, 1877	720	223	11	318
191,056	Huntington, Edgar O., assignor to self and S. S. Perkins, Saginaw City, Mich. Car-heater	May 22, 1877	985	293	11	898
189,100	Huntington, Harry W., Williamsburg, N. Y. Night-lamp	Apr. 3, 1877	79	28	11	570
196,580	Huntington, Lawson G., New York, N. Y. Lantern	Oct. 30, 1877	951	275	12	730
190,329	Huntington, Thomas S., New York, N. Y. Button-hole attachment for sewing-machines	May 1, 1877	211	63	11	774
194,041	Huntoon, Reuben K., Wakefield, assignor to Allen Governor Company, Boston, Mass. Apparatus for regulating the supply of steam to gas-exhausters	Aug. 14, 1877	261	77	12	277
188,518	Huntress, William, Lowell, Mass. Work-box	Mar. 20, 1877	571	176	11	472
194,241	Huot, Frank, Davenport, Iowa. Stitching-horse for harness-makers	Aug. 14, 1877	470	142	12	304
192,262	Huppelsberg, Friedrich W., Brooklyn, N. Y. Corded-edge braid	June 19, 1877	777	236	11	1095
193,961	Hurcombe, John C., assignor to Keep Manufacturing Company, New York, N. Y. Umbrella-cover	Aug. 7, 1877	160	49	12	256
198,621	Hurcombe, John C., assignor of one-half interest to D. C. Dawes, New York, N. Y. Clasp-tip for umbrella-covers	Dec. 25, 1877	942	288	12	1107
190,042	Hurd, Asa, Yonkers, N. Y. Work-holding device for drilling-machines	Apr. 24, 1877	1077	328	11	723
190,043	Same.....Chuck	Apr. 24, 1877	1078	328	11	723
190,435	Hurd, George W., Ionia, Ill. Neck-yoke	May 8, 1877	339	99	11	799
185,927	Hurd, Ira N., assignor of two-thirds interest to A. B. Lawrence and C. T. Watkins, Warsaw, N. Y. Clothes-drier	Jan. 2, 1877	116	35	11	23
190,436	Hurd, L. Ell, assignor of one-half interest to J. G. Ellis, Cincinnati, Ohio. Anti-incrustation compound	May 8, 1877	340		11	799
187,863	Hurd, Reuben, Westford, Mass. Wagon-brake	Feb. 27, 1877	964	300	11	358
189,739	Hurd, Robert B., Paterson, N. J. Composition for washing clothes	Apr. 17, 1877	746		11	671
	Hurd, William C. (*See* Butler, William H., assignor.)					
	Hurlbut, Rufus H. (*See* Moore & Hurlbut.)					
191,682	Hurley, Asa C., Purdy, Tenn. Manure-drill	June 5, 1877	163	50	11	998
	Hurley, Daniel J. (*See* Hurley, John A. and D. J.)					
195,508	Hurley, John A. and D. J., Oil City, Pa. Apparatus for operating pumps	Sept. 25, 1877	187	232	12	535
190,492	Hursh, Joseph, New York, N. Y. Iron-molding	May 8, 1877	396	115	11	806
189,463	Hurst, Abram R., Mechanicsburg, Pa. Lifting-jack	Apr. 10, 1877	455	143	11	625
194,684	Husby, Erick E., Montevideo, Minn. Horse-power	Aug. 28, 1877	921	274	12	381
197,136	Huss, Henry, Mount Vernon, N. Y. Book-displaying rack	Nov. 13, 1877	423	125	12	829
187,144	Huss, Maurice L., Clyde, Ohio. Corn-husking implement	Feb. 6, 1877	214	70	11	232
	Hussey, C. Curtis. (*See* Adair, James, assignor.)					
195,762	Hussey, Charles A., New York, N. Y. Galvanic battery	Oct. 2, 1877	69	21	12	571
190,862	Hussey, Levi, New York, N. Y. Neck-tie retainer	May 15, 1877	773	229	11	863
	Hustead, V. P., *et al.* (*See* Hazelrigg, John W., assignor.)					
	Huston, James A. (*See* Overmyer & Huston.)					
191,148	Huston, Robert W., Brooklyn, N. Y., assignor of one-half interest to J. G. Auld, Washington, D. C. Napkin-holder	May 22, 1877	1069	320	11	910
	Hutchings, J. J., *et al.* (*See* Roth, Charles F., assignor.)					
192,999	Hutchings, William, Providence, R. I. Castanet	July 10, 1877	455	137	12	83
194,242	Hutchins, Abner B., Brooklyn, N. Y. Hydro-carbon stove	Aug. 14, 1877	471	143	12	304
187,012	Hutchins, Dexter H., Algona, Iowa. Machine for catching and destroying grasshoppers	Feb. 6, 1877	96	32	11	215
	Hutchins, Lucy J. M. (*See* Keys, William, assignor.)					
195,828	Hutchinson, Arthur G., and G. F. Ransom, Cleveland, Ohio. Burglar-alarm	Oct. 2, 1877	128	37	12	579
	Hutchinson, Edwin L. (*See* Hambujer, Ephraim, assignor) (Reissue.)					
	Hutchinson, George C. (*See* Parkhurst, James H., assignor.)					
186,132	Hutchinson, Henry M., and M. V. Lunger, Philadelphia, Pa. Combined wall-protector and towel-rack	Jan. 9, 1877	315	96	11	59
186,841	Same.....Spring-seat stool	Jan. 30, 1877	1045	322	11	183
	Hutchinson, Thomas S., *et al.* (*See* Starkey, William, assignor.)					
189,464	Hutchinson, Warren N., South Bay City, assignor of one-half interest to W. P. Lapham, Bay City, Mich. Hitching-post	Apr. 10, 1877	456	143	11	625
192,168	Hutchinson, William S., Chicago, Ill. Device for aiding combustion in steam-boilers and other furnaces	June 19, 1877	673	206	11	1082
197,730	Same.....Air-feeding attachment for locomotives	Dec. 4, 1877	22	7	12	949
191,762	Huth, Henry Milton, assignor to self and J. H. Shreiner, Philadelphia, Pa. Fire-escape	June 12, 1877	243	77	11	1015
192,435	Huth, John, assignor to self and J. Veelm, Sandyville, Ohio. Holder for soldering eave-troughs	June 26, 1877	970	291	11	1133
	Hutter, Karl. (*See* De Quillfeldt, Charles, assignor) (Reissue.)					
192,169	Hutton, George H., Boonsborough, Md. Dash-board	June 19, 1877	673	206	11	1082
188,368	Hutton, John, New York, N. Y. Brake and auxiliary rudder for vessels	Mar. 13, 1877	412	128	11	442
196,230	Hutton, Robert, assignor of one-half interest to P. Haffner, Brooklyn, N. Y. Roller-skate	Oct. 16, 1877	573	166	12	657
190,969	Hutton, Walter M., Cleveland, Ohio. Bridle-bit	May 22, 1877	899	266	11	887
	Huyck, J. H. (*See* Secord, John E., assignor.)					
185,928	Hyatt, Isaiah S. and J. W., Newark, N. J.; said J. W. Hyatt assignor to said I. S. Hyatt. Boring-machine	Jan. 2, 1877	116	35, 36	11	23
195,010	Hyatt, Isaiah S., Newark, N. J. Manufacture of brushes	Sept. 11, 1877	262	80, 81	12	414
	Hyatt, John W. (*See* Hyatt, Isaiah S. and John W.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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187,145	Hyatt, John W., Newark, N. J. Slate	Feb. 6, 1877	215	70	11	232
187,146	Same.....same	Feb. 6, 1877	216	70	11	232
189,101	Hyde, Albert A., Wichita, Kans. Coin-tray	Apr. 3, 1877	80	28	11	570
187,281	Hyde, James, Stottville, N. Y. Shuttle-box loom	Feb. 13, 1877	363	116	11	264
198,113	Hyde, James B., Whitesborough, Tex. Heater and feeder for steam-boilers	Dec. 11, 1877	409	128	12	1014
195,450	Hyde, J. Little, New York, N. Y. Cork-screw frame	Sept. 25, 1877	730	215	12	527
	Hyde, Thomas W. (*See* Patten, George M., assignor.)					
187,282	Hyde, Thomas W., Bath, Me. Reverse-power capstan	Feb. 13, 1877	365	117	11	264
192,263	Same.....Windlass	June 19, 1877	778	236	11	1095
188,369	Hyde, William B., Oakland, Cal. Dredging	Mar. 13, 1877	413	{128 / 129}	11	442
	Hydrocarbon Steam Generating Company. (*See* Browne, William F., assignor.)					
194,967	Hyer, Charles M., Iowa Falls, Iowa. Wood-worker's float	Sept. 11, 1877	221	68	12	438
193,336	Hymers, Christopher, Saint Louis, Mo. Coal-box	July 24, 1877	826	253	12	148
191,763	Hyndman, William G., Cincinnati, Ohio. Securing metal plates on structures	June 12, 1877	244	77	11	1015
	Hynes, Elizabeth, *et al.* (*See* Solomon, Etienne, assignor.)					
194,823	Hyre, Aaron, Churubusco, Ind. Gate	Sept. 4, 1877	68	23	12	410
190,493	Hyre, Wesley, Collins, Ind. Strap-fastener	May 8, 1877	397	116	11	806
186,573	Iannarone, Frank P., Washington, D. C. Eye-glass	Jan. 23, 1877	773	239	11	138
191,149	Same.....same	May 22, 1877	1070	320	11	910
190,863	Ibbotson, Alfred B., Florence, Italy, and F. J. Talbot, Sheffield, England. Railway-rail joint	May 15, 1877	773	230	11	863
191,968	Same.....Forming threads on screw-bolts and nuts	June 12, 1877	450	139	11	1041
194,243	Iden, Henry, New York, N. Y. Cigar-lighter	Aug. 14, 1877	472	143	12	304
	Idleman, Cicero M. (*See* Strobel & Idleman.)					
190,044	Iffland, Daniel, assignor of one-half interest to E. Hadenfeld, Hamburg, Germany. Water-feeder for steam-boilers	Apr. 24, 1877	1079	328	11	723
190,045	Same.....Speed and current indicator	Apr. 24, 1877	1080	{328 / 329}	11	723
190,070	Imbach, Martin G., Brooklyn, N. Y. Furnace-grate	June 19, 1877	579	175	11	1070
190,046	Imboden, John D., Richmond, Va. Steam street-car	Apr. 24, 1877	1082	{329 / 330}	11	724
	Imhaeuser, Elise. (*See* Imhaeuser, William, assignor.)					
192,334	Imhaeuser, William, assignor to E. Imhaeuser, Brooklyn, N. Y. Watchmen's time-detector	June 26, 1877	875	264	11	1120
191,969	Imlay, William L., Camden, assignor to D. Smith, Burlington, N. J. Hydrocarbon-burner	June 12, 1877	451	140	11	1041
197,855	Imlay, William L., Camden, N. J., assignor of one-half interest to G. Sturges, Philadelphia, Pa. Roasting ores	Dec. 4, 1877	147	45	12	967
	Indiana Manufacturing Company. (*See* Hull, Nicholas A., assignor.)					
192,371	Ingalls, Elias T., Haverhill, Mass. Weather-strip	June 26, 1877	910	273	11	1125
195,286	Ingalls, Samuel S., Chicago, Ill. Concrete-block pavement	Sept. 18, 1877	562	164	12	495
195,287	Same.....Laying concrete pavement	Sept. 18, 1877	563	164	12	495
	Ingels, M. F., *et al.* (*See* Ingels, Thomas J., assignor.)					
194,685	Ingels, Thomas J., assignor of two-thirds interest to J. Appleton and M. F. Ingels, Atchison, Kans. Gate	Aug. 28, 1877	922	274	12	381
	Ingersoll, Jonathan E. (*See* Harrison, Jonathan W., assignor.)					
192,762	Ingersoll, Platt C., assignor to self and J. N. Balston, Brooklyn, N. Y. Hand power-press for baling cotton, &c	July 3, 1877	202	58	12	40
	Ingersoll Rock Drill Company. (*See* Ingersoll, Simon, assignor) Reissue.)					
7,473	Ingersoll, Simon, Brooklyn, N. Y., assignor, by mesne assignments, to Ingersoll Rock Drill Company. Rock-drill.....(Reissue)..	Jan. 23, 1877	858	265	11	149
188,141	Ingersoll, Simon, Stamford, Conn. Chuck for rock-drills	Mar. 6, 1877	173	53	11	403
196,904	Same.....Hose-coupling	Nov. 6, 1877	174	51	12	784
193,000	Ingledue, William, Marshalltown, Iowa. Hay rake and loader	July 10, 1877	455	137	12	83
186,253	Inglee, Lewis, New York, N. Y. Egg-carrier	Jan. 16, 1877	437	134	11	82
197,856	Inglis, Samuel B., assignor of one-half interest to E. T. Jameson, Pittsburg, Pa. Lamp-chimney	Dec. 4, 1877	148	45	12	967
188,639	Ingraham, William S., Waukegan, Ill. Sickle-grinder	Mar. 20, 1877	679	209	11	487
198,114	Same.....same	Dec. 11, 1877	410	128	12	1014
194,152	Ingram, William J., Westminster, England. Rotary printing-machine	Aug. 14, 1877	389	{115 / 116}	12	293
187,533	Inness, Thomas B., Pottsville, Pa. Spool-holder	Feb. 20, 1877	624	194	11	305
195,608	Inslee, Joseph H. P., Mount Vernon, assignor of one-third interest to R. Russell, New York, N. Y. Alarm-clock	Sept. 25, 1877	876	260	12	548
190,437	Irelan, William, Oak Springs, Iowa. Bridge	May 8, 1877	340	99	11	799
	Ireland, Francis C. (*See* Leggo & Ireland.)					
193,001	Ireland, George H., Springfield, Mass. Toy Noah's ark	July 10, 1877	457	138	12	83
195,011	Same.....Toy	Sept. 11, 1877	267	81	12	444
188,370	Ireland, William, Buckhaven, North Britain. Machine for printing textile fabrics	Mar. 13, 1877	415	129	11	442
193,707	Same.....Rotary-speed measure	July 31, 1877	1209	363	12	211
	Ireland, William H. (*See* Chamberlain, Dexter H., assignor.)					
	Same(*See* Fowle, Joseph W., assignor.)					
	Ireland, William H., *et al.* (*See* Merritt, Henry W., assignor.)					
191,531	Irland, David H., New York, N. Y. Portable gas apparatus	June 5, 1877	24	7	11	979
192,071	Irons, Frank M., assignor of one-half interest to J. H. Miller, Greenville, Mich. Machine for grooving sheet-metal pipes	June 19, 1877	579	175	11	1070
7,804	Irvine, John, Ickesburg, Pa. Whiffletree-iron.....(Reissue)..	July 24, 1877	1071	321	12	180
188,912	Same.....same	Mar. 27, 1877	970	296	11	535
	Irving, Samuel C. (*See* Bowman & Irving.)					
186,481	Irwin, Charles S., Saint Joseph, Mo. Coal-scuttle	Jan. 23, 1877	690	212	11	126
	Irwin, James, *et al.* (*See* Hainsworth, William, assignor.)					
188,142	Irwin, James, Allegheny, Pa. Street-lamp	Mar. 6, 1877	173	53	11	403
195,133	Irwin, James H., Cornelia, Mo. Animal-trap	Sept. 11, 1877	391	118	12	463
	Irwin, Robert, *et al.* (*See* Ellinwood, Augustus E., assignor.)					
	Irwin, William S. (*See* Peterson, John H., assignor.)					
196,150	Isaacs, George and S., New York, N. Y. Rail-cleaner for cars	Oct. 16, 1877	492	143	12	646
195,217	Isaacs, Marcus C., Chicago, Ill. Railway-track clearer	Sept. 18, 1877	490	145	12	485
	Isaacs, Samuel. (*See* Isaacs, George and S.)					
192,869	Isbell, Ceylou, Homer, N. Y. Rotary churn	July 10, 1877	338	99	12	66
195,012	Isbell, Ceylon and E. C. Taylor, Little York, N. Y. Wooden cover for vessels	Sept. 11, 1877	268	81	12	445
193,515	Isbell, Charles W., New York, N. Y. Gas-governor	July 24, 1877	997	301	12	171
195,013	Iseminger, Daniel H., assignor of one-half interest to M. Falcon, Bloomington, Ill. Reciprocating engine	Sept. 11, 1877	269	82	12	445

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191,150	Isham, Harry L., Plattsburg, N. Y. Vehicle-spring	May 22, 1877	107	320	11	910
189,740	Israel, Hannah E., Stockton, Cal. Washing-list indicator	Apr. 17, 1877	746	229	11	671
186,317	Israel, James P., Stilesville, Mo. Weaning-bit for animals	Jan. 16, 1877	544	165	11	95
193,602	Israel, John, Lancaster, Ohio. Burglar-alarm	July 10, 1877	457	138	12	83
	Ives, Blakeslee & Mott. (*See* Dean, Albert H., assignor.)					
	Ives, Frank. (*See* Ashelman, John B., assignor.)					
189,102	Ives, Hiram L, assignor to self and T. H. Butcher, Troy, N. Y. Lamp-shade holder	Apr. 3, 1877	80	29	11	570
189,359	Same.....Lamp-chimney	Apr. 10, 1877	356	114	11	613
196,581	Ives, Hiram L., Troy, N. Y. Lamp	Oct. 30, 1877	952	276	12	730
	Ives, Hobart B. (*See* Davis, Frank, assignor.)					
186,039	Ives, James, Mount Carmel, Conn. Carriage-top prop	Jan. 9, 1877	231	69	11	47
188,143	Same.....Annealing-furnace for metals	Mar. 6, 1877	174	53, 54	11	404
196,155	Same.....Whiffletree coupling-plate	Oct. 16, 1877	496	144	12	646
195,373	Ives, William A., New Haven, Conn. Bit-brace	Sept. 18, 1877	639	189	12	506
193,874	Ivor, John P., Indianapolis, Ind. Hemmer for sewing-machines	Aug. 7, 1877	69	22	12	244
190,864	Jablochkoff, Paul, Paris, France. Carbon for electric lights	May 15, 1877	776	230	11	863
194,686	Jaccard, David H., San Francisco, Cal. Hinge	Aug. 28, 1877	922	274	12	381
	Jackman, A. C. (*See* Ellis & Willis, assignors.)					
190,866	Jackman, John M., Barre, Vt. Soap-boiler	May 15, 1877	778	230	11	863
186,934	Jackson, Albert H., La Fayette, Ill. Lamp-chimney cleaner	Feb. 6, 1877	21	10	11	205
189,226	Jackson, Ambrose F., Minneapolis, Minn. Bolt-heading machine	Apr. 3, 1877	191	65	11	584
186,574	Jackson, Byron, Woodland, Cal. Portable derrick	Jan. 23, 1877	774	229	11	138
197,137	Same.....Horse hay-fork	Nov. 13, 1877	424	125	12	829
194,968	Jackson, Caleb H., Harrisburg, Pa. Hand-truck	Sept. 11, 1877	221	69	12	438
	Jackson, C. H. (*See* Middleton, William A., assignor.)					
	Jackson, Charles H. (*See* Jackson, Walter, assignor.)					
	Jackson, Dennison W. B., *et al.* (*See* Esty, William, assignor.)					
195,929	Jackson, George, assignor to J. E. Jackson, Cohoes, N. Y. Take-up for knitting-machines	Oct. 9, 1877	252	71	12	604
	Jackson, James, *et al.* (*See* Kraus, Herman T. C. assignor.)					
	Jackson, James E. (*See* Jackson, George, assignor.)					
190,593	Jackson, James R., Coldwater, Miss. Plow	May 8, 1877	492	146	11	819
	Jackson, John. (*See* Weir, Daniel P., assignor.)					
195,893	Jackson, John, Saint Louis, Mo. Device for distributing grain in loading cars	Oct. 9, 1877	213	60	12	599
190,760	Jackson, John W., Sharpsville, Pa. Stove-pipe shelf	May 15, 1877	684	203	11	851
190,219	Jackson, Morgan P., Bonville, N. Y. Curd cutter and agitator	May 1, 1877	104	30	11	760
	Jackson, Sam. (*See* Vaughn & Jackson.)					
193,003	Jackson, Thomas B., New Wilmington, Pa. Bag-fastening	July 10, 1877	458	138	12	83
7,474	Jackson, Walter M., Providence, R. I., assignor of one-half interest to H. N. Smith. Gas-stove (Reissue)	Jan. 23, 1877	859	265	11	149
186,254	Jackson, Walter M., assignor of one-half interest to C. H. Jackson, Providence, R. I. Broom	Jan. 16, 1877	438	135	11	82
194,042	Jackson, Walter M., Providence, R. I. Broom	Aug. 14, 1877	263	78	12	278
187,014	Jackson, William, Millerston, Pa. Balanced valve for steam-engines	Feb. 6, 1877	98	33	11	215
190,865	Jacob, Charles M., Paris, France. Composition seal for bottles and jars	May 15, 1877	777		11	863
190,047	Jacob, Frederick, Newark, N. J. Sewing-machine	Apr. 24, 1877	1086	330	11	724
185,929	Jacobi, Rodolfo, Puebla, Mexico. Loose-rim wheel	Jan. 2, 1877	119	36	11	23
185,930	Same.....Car-brake	Jan. 2, 1877	120	36	11	24
190,331	Jacobs, Charles H., Winnebago, Ill. Tire-tightener	May 1, 1877	215	64	11	774
	Jacobs, Peter. (*See* French, William I., assignor.)					
	Jacobson, Christian F. (*See* Pittman & Jacobson.)					
190,592	Jacobson, Christian F., assignor to self, J. C. Jones, and G. E. Maltby, New York, N. Y. Machine for making twist drills	May 8, 1877	491	146	11	818
195,014	Jacobson, Jacob, Swan Lake, Dak. Potato-bug destroyer	Sept. 11, 1877	270	82	12	445
186,423	Jacoby, Christopher R., Pittsburg, Pa. Machine for sawing steel railway-rails	Jan. 23, 1877	634	193	11	119
7,527	Jacoby, D. W., Shelbyville, assignor to J. A. Chestnut, Springfield, and A. M. Dubois, Carlinville, Ill. Corn-planter (Reissue)	Feb. 20, 1877	790	245	11	327
194,915	Jacot, Henry C., Saint Louis, Mo. Regulating attachment to pendulum-balls	Sept. 4, 1877	157	49	12	422
198,390	Same.....Pendulum-regulator for clocks	Dec. 18, 1877	708	215	12	1063
193,409	Jacques, Edwin, assignor to self and R. Gotier, Great Falls, N. H. Concrete-pavement compound	July 24, 1877	895		12	157
196,151	Jacques, Joseph R., Hancock, Mich. Last	Oct. 16, 1877	493	143	12	646
195,509	Jadwin, Orlando H., Brooklyn, N. Y. Accommodating pulley for cables used in propelling cars, &c	Sept. 25, 1877	787	232	12	535
186,133	Jaeger, Gustav L., New York, N. Y. Machine for cutting paper and other material	Jan. 9, 1877	316	97	11	59
193,161	Same.....Machine for damping, cutting, and feeding paper and other materials	July 17, 1877	623	189	12	113
195,823	Same.....Machine for feeding and cutting paper and other materials	Oct. 2, 1877	130	37	12	579
195,824	Same.....Same	Oct. 2, 1877	131	37	12	580
187,534	Jaeger, John P., Eureka, Wis. Combined stove-pipe drum and shelf	Feb. 20, 1877	625	194	11	305
186,134	Jahne, Welmer T., and A. Moers, Jersey City, N. J. Fishing-line leader	Jan. 9, 1877	318	97	11	59
191,859	Jahne, Welmer T., and C. H. White, Jersey City, N. J. Roller razor-sharpener	June 12, 1877	342	105	11	1026
195,131	Jakel, Ferdinand, assignor of one-half interest to J. Ollis, Detroit, Mich. Fire-escape	Sept. 11, 1877	392	118	12	463
189,465	Jakel, John, assignor of one-half interest to F. L. Dohnstreich, Detroit, Mich. Hop-press	Apr. 10, 1877	456	143	11	626
187,013	Jakson, Walter M., Providence, R. I. Oven for gas stoves	Feb. 6, 1877	96	33	11	215
187,636	Jameison, William, Saratoga Springs, N. Y. Blacking-box	Sept. 18, 1877	640	190	12	506
195,374	James, Bushrod W., Philadelphia, Pa. Cooling or disinfecting the air of rooms	Feb. 20, 1877	722	224	11	318
188,296	James, Francis B., Cincinnati, Ohio. Coffin	Mar. 13, 1877	339	106	11	432
197,374	James, George F., assignor of one-half interest to W. T. Glover, Manchester, England. Braiding-machine	Nov. 20, 1877	678	202, 203	12	875
192,120	James, John K., Cambridge, Mass., assignor to C. Harrison, New York, N. Y. Basin-cock	June 19, 1877	626	190	11	1076
195,609	James, John T., Love's Mills, Va. Planing attachment to saws	Sept. 25, 1877	877	261	12	548
195,610	James, John T., Love's Mills, assignor to self and J. Cole, Washington County, Va. Saw	Sept. 25, 1877	878	261	12	548
197,473	James, Samuel H., Uppingham, England. Bolt and nut	Nov. 27, 1877	791	247	12	901
192,763	James, Thomas, Baltimore County, Md. Brick-machine	July 3, 1877	203	58	12	40
196,905	James, Thomas, Braddock's, Pa. Furnace-grate	Nov. 6, 1877	175	51	12	784
	Jameson, Edward T. (*See* Inglis, Samuel B., assignor.)					
197,857	Jameson, Robert B., South Union, Ky. Instrument for suckering tobacco-plants	Dec. 4, 1877	149	45	12	967
194,916	Jamieson, Augustus, Princeton, Ill. Fire and weather proof composition	Sept. 4, 1877	157		12	422
192,072	Jamieson, Henry A., Brooklyn, N. Y. Pump	June 19, 1877	580	176	11	1070

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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196,755	Jamieson, Henry A., assignor to self and W. Foster, Brooklyn, N. Y. Hat-pressing machine	Nov. 6, 1877	19	6	12	753
198,391	Jamieson, Henry A., Brooklyn, N. Y. Lubricating piston	Dec. 18, 1877	708	215	12	1061
190,867	Jamin, Nicolaus, New York, N. Y. Fastening for gas-retort lids	May 15, 1877	779	231	11	864
	Jamison Boot and Shoe Crimping Machine Company, S. W. (*See* Jamison, Samuel W., assignor)					
198,622	Jamison, Samuel W., Newark, N. J., assignor to S. W. Jamison Boot and Shoe Crimping Machine Company. Leather-crimping machine	Dec. 25, 1877	944	288 289	12	1107
187,467	Janes, Henry D., Dodge Center, Minn. Road scraper and grader	Feb. 20, 1877	563	174	11	297
194,601	Janes, Horace, Knobnoster, Mo. Tobacco-harvester	Aug. 28, 1877	843	251	12	371
	Janeway, Jacob J. (*See* Waldron, John, assignor.)					
191,683	Janezeck, John J., assignor of one-half interest to W. H. Faulkner, Washington, D. C. Swing	June 5, 1877	164	51	11	998
	Janin, Albert C. (*See* Fixary, Edward, assignor.)					
187,864	Janson, Bernhard, Effingham, Ill. Reciprocating churn	Feb. 27, 1877	965	360	11	359
	Janssen, Cornelius A. (*See* Fixmer & Janssen.)					
190,594	Janssen, Diedrich, Brooklyn, N. Y. Portable windlass	May 8, 1877	493	147	11	819
187,760	Jantzen, John H., Pittsburg, Pa. Fastener for pocket-books	Feb. 27, 1877	859	267	11	345
196,668	Japy, Emile, and C. Daillier, Paris, France. Registering and measuring faucet	Oct. 30, 1877	1034	301	12	742
186,678	Jaques, Abram C., Leavenworth, Kans. Broom	Jan. 30, 1877	881	272	11	161
7,650	Jarecki, Albert F., Erie, Pa. Pipe-tongs (Reissue)	May 1, 1877	299	87	11	785
190,330	Same.....same	May 1, 1877	214	64	11	774
196,231	Same.....Pump-rod adjuster for oil-wells	Oct. 16, 1877	574	166	12	657
7,792	Jarecki, Charles, Erie, Pa., assignor, by mesne assignments, to Jarecki Manufacturing Company. Piston for deep-well pumps (Reissue)	July 17, 1877	786	241	12	134
195,611	Jarecki, Charles, Erie, Pa. Lock-cock	Sept. 25, 1877	879	261	12	548
190,868	Jarecki, Frederick, Erie, Pa. Cut-off for gas and water pipes	May 15, 1877	780	231	11	864
	Jarecki Manufacturing Company. (*See* Freeman, Hiram, assignor.)					
	Same.....(*See* Jarecki, Charles, assignor) (Reissue.)					
187,637	Jarrell, James, Thorntown, Ind. Subsoil plow	Feb. 20, 1877	722	224	11	318
193,089	Jarves, James J., Boston, Mass. Furnace and stove	July 17, 1877	563	169	12	101
186,734	Jarvis, Kingsbury M., assignor to self and A. F. Upton, Peabody, Mass. Smoke and gas consuming furnace	Jan. 30, 1877	931	289	11	168 169
189,862	Jarvis, Kingsbury M., Peabody, Mass. Boiler-setting	Apr. 24, 1877	888	271	11	699
189,227	Jasper, Wilhelm, Morrisania, assignor of one-half interest to J. C. Kelley, Brooklyn, Y. N. Car-starter	Apr. 3, 1877	192	65	11	584
194,244	Jasper, William, assignor of one-half interest to S. Boushey, San Francisco, Cal. Machinery for cutting and pressing sugar into cubes	Aug. 14, 1877	473	143	12	304
	Jauss, David L. (*See* Tippett & Jauss.)					
186,478	Jeakle, George, Napoleon, Ohio. Tug-carrier	Jan. 23, 1877	687	211	11	125 126
196,906	Jebsen, Ernst, Chicago, Ill. Machine for making inlaid work	Nov. 6, 1877	176	51	12	781
	Jeffers, Milton C., *et al.* (*See* Thiers, William F., assignor.)					
193,119	Jeffers, Selah, Litchfield, Mich. Reciprocating churn	July 17, 1877	589	178	12	108
196,669	Jeffers, William, Pawtucket, R. I. Pump for fire service	Oct. 30, 1877	1036	301	12	742
191,287	Jefferson, Liberty F., Monmouth, Ill. Road-scraper	May 29, 1877	1222	367	11	939
197,516	Jeffery, Edwin A., Jersey City, N. J. Griddle	Nov. 27, 1877	839	250	12	907
197,275	Jeffery, Jacob H., Orland, Ind. Washing-machine	Nov. 20, 1877	579	171	12	860
	Jeffords, C. L., *et al.* (*See* Cardot, Charles W., assignor.)					
	Jeffords, John E. (*See* Woodward & Jeffords.)					
193,708	Jeffords, John E., Philadelphia, Pa. Tea-pot	July 31, 1877	1211	363	12	211
	Jeffreys, William. (*See* Livesey, Edwards & Jeffreys.)					
	Jelfs, John. (*See* Seevers & Jelfs.)					
	Jenkins, Alfred B. (*See* Jenkins, Charles and A. B.)					
190,683	Jenkins, Charles and A. B., Boston, Mass. Punch for leather, &c	May 15, 1877	607	180	11	841
196,232	Jenkins, Charles W., Richmond, Va. Reversible plow-point	Oct. 16, 1877	575	166	12	657
187,387	Jenkins, David, Pittsburg, Pa. Lubricator	Feb. 13, 1877	468	146	11	277
194,245	Jenkins, Frederick P., Boston, Mass. Sizing and dressing cotton	Aug. 14, 1877	475		12	305
195,015	Jenkins, Harry M., Baltimore, Md. Fountain-brush	Sept. 11, 1877	271	83	12	445
197,858	Same.....Broom	Dec. 4, 1877	149	46	12	967
191,005	Jenkins, James, Buffalo, N. Y. Furnace	May 22, 1877	937	277	11	892
186,255	Jenkins, James H., New York, N. Y. Whirling toy	Jan. 16, 1877	439	135	11	82
190,438	Same.....Spinning toy	May 8, 1877	341	100	11	799
195,825	Jenkins, Joel, Brooklyn, N. Y. Safety-pin	Oct. 2, 1877	132	38	12	580
189,466	Jenkins, Joseph C., Lebanon, Tenn. Plow	Apr. 10, 1877	457	144	11	626
190,595	Jenkins, William R., jr., Bellefonte, Pa. Turbine water-wheel	May 8, 1877	493	147	11	819
	Jenkins, Wilson M. (*See* Kearns, Lewis & Jenkins.)					
198,115	Jenkins, Wilton F., jr., assignor of one-half interest to E. L. Van Lew, Richmond, Va. Car-axle-box brass	Dec. 11, 1877	411	128	12	1014
188,800	Jenkinson, James, Brooklyn, N. Y. Child's carriage	Mar. 27, 1877	860	262	11	520
	Jenks, George A. (*See* Jenks, James, assignor.)					
187,638	Jenks, James, assignor of one-half interest to G. A. Jenks, Detroit, Mich. Rotary valve	Feb. 20, 1877	723	224	11	318
188,913	Same.....Feeding hot-air furnaces	Mar. 27, 1877	970	297	11	535
188,914	Same.....Device for heating and feeding air to furnaces	Mar. 27, 1877	971	297	11	536
193,004	Jenks, Orrin L., assignor to self and W. S. Jenks, Port Huron, Mich. Circular-saw mill	July 10, 1877	459	138 139	12	83
	Jenks, William S. (*See* Jenks, Orrin L., assignor.)					
193,090	Jenne, Chancy R., and W. Creighton, Okolona, Miss. Washing-machine	July 17, 1877	564	169	12	101
192,831	Jenne, Thomas J., Gouverneur, N. Y. Lifting-jack	July 10, 1877	304	89	12	61
190,761	Jenney, Walter P., Brooklyn, N. Y. Paint	May 15, 1877	684		11	851
190,762	Same.....Treating sludge and sludge-oil	May 15, 1877	686		11	851
187,015	Jennings, Charles S., Branford, Conn., assignor to T. Kennedy, New York, N. Y. Knob-lever for mortise latches	Feb. 6, 1877	98	33	11	215
198,392	Jennings, D. Ufford, Charleston, S. C. Manufacture of waxed thread	Dec. 18, 1877	709	215	12	1064
187,147	Jennings, George, London, England. Wash-basin and sink combined	Feb. 6, 1877	217	71	11	232
189,741	Same.....Water-closet	Apr. 17, 1877	747	229	11	672
191,970	Same.....Sink	June 12, 1877	452	140	11	1041
196,806	Jennings, Gregory, West Cairo, Ohio. Rein-holder	Nov. 6, 1877	69	21	12	770
7,962	Jennings, Isaac, Fairfield, Conn. Paper-pulp distributer (Reissue)	Nov. 27, 1877	1050	315	12	936
188,371	Same.....same	Mar. 13, 1877	417	130	11	442
194,438	Jennings, Linnæus C., Saint Charles, assignor of one-half interest to E. J. Pitts, Pattonville, Mo. Self-heating flat and fluting iron	Aug. 21, 1877	680	203	12	338
183,141	Jennings, Ralph S., assignor of one-half interest to N. G. Kellogg, New York, N. Y. Filter	Mar. 6, 1877	174	56	11	401

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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190,048	Jennings, Reuben T., sr., Richmond, Va., assignor of one-half interest to J. B. Crenshaw. Mill-bush	Apr. 24, 1877	1087	331	11	724
193,874	Jennings, Warren P., Brooklyn, N. Y. Jacquard machinery	Aug. 7, 1877	70	23	12	244
190,684	Jennison, Charles R., Boston, assignor to self and E. K. Hall, Needham, Mass. Galvanic battery	May 15, 1877	608	180, 181	11	841
	Jenree, Ira. (*See* Busley, Henry, assignor.)					
	Jenree, Ira, *et al.* (*See* Thompson, Charles H., assignor.)					
188,915	Jensen, Conrad, Boston, Mass. Station-indicator	Mar. 27, 1877	972	297	11	536
198,301	Jensen, Frederick, Seattle, Wash. Ter. Bed-lounge	Dec. 18, 1877	624	189	12	1051
	Jensen, Goodman. (*See* Kearns & Jensen)					
	Jensen, Jens. (*See* Anderson, Edgar J., assignor.)					
189,467	Jensen, Jens, Racine, Wis. Wagon-box strap-bolt	Apr. 10, 1877	458	144	11	626
	Jernegan, Thomas, trustee. (*See* Westwood, William J., assignor.)					
	Jessee, William W., *et al.* (*See* Roundtree, John T., assignor.)					
187,639	Jessen, Gustavus M., Portland, Oreg. Speed and distance indicator	Feb. 20, 1877	724	224	11	318
195,016	Jesson, Thomas, Galway, and T. Duggan, Glasnevin, Ireland Brush	Sept. 11, 1877	271	83	12	445
195,017	Same.....Brush-making machine	Sept. 11, 1877	272	83	12	445
186,575	Jessop, Samuel N., assignor of one-third interest to P. G. M. Haupt, Erie, Pa. Pipe-tongs	Jan. 23, 1877	775	239	11	138
197,138	Jeter, John T., Jacksonville, Ala. Harvester-dropper	Nov. 13, 1877	425	125	12	830
	Jewett & Root. (*See* Jewett, Josiah, assignor.)					
	Same.....(*See* Root, Francis H., assignor.)					
	Same.....(*See* Stanard, Gaylord S., assignor.)					
	Jewett, Edward M. (*See* Sangster, Amos W., assignor.)					
	Same.....(*See* Sangster, James, assignor.)					
191,151	Jewett, Israel D., Saint Omer, Ind. Grate	May 22, 1877	1072	231	11	910
187,976	Jewett, Joel O., and P. F. Leonard, Macon City, Mo. Photographic camera	Mar. 6, 1877	22	6	11	383
	Jewett, Joseph F. (*See* Grinter, Thomas W., assignor.)					
198,243	Jewett, Josiah, assignor to Jewett & Root, Buffalo, N. Y. Stove	Dec. 18, 1877	578	174	12	1044
192,512	Jeynes, Thomas, Detroit, Mich. Shield for tunnels	June 26, 1877	1048	315	11	1142
7,525	Jillson, William C., and A. B. Palmer, Willimantic, Conn. Machine for opening cotton, &c.....(Reissue)	Feb. 20, 1877	788	244	11	327
198,024	Jinkins, Frederic, Orange, N. J. Hat-box	Dec. 11, 1877	321	99	12	1001
197,139	Job, Daniel, Niles, Ohio. Rotary valve	Nov. 13, 1877	426	126	12	830
189,103	Johannes, Ira H., Washington, D. C., assignor of one-half interest to self and R. T. Waters, Baltimore, Md. Eye-glass	Apr. 3, 1877	81	29	11	570
194,872	John, Jacob, New York, N. Y. Button	Sept. 4, 1877	114	36	12	416
190,332	John, Matthew, Pittston, Pa. Drill-bit	May 1, 1877	216	64	11	774
192,375	Johns, Jacob R., Millersburg, Pa. Car-starter	June 26, 1877	916	275	11	1125
188,017	Johns, Levi, and I. Faloon, Salineville, Ohio. Weather-strip	Mar. 6, 1877	59	17	11	388
193,516	Johns, William B., Georgetown, D. C. System and apparatus for the improvement of the navigation of rivers	July 24, 1877	999	302	12	172
	Johnson & Son. (*See* Johnson, William A., assignor.)					
190,494	Johnson, Abel, Northumberland, Pa. Bag-holder	May 8, 1877	397	116	11	806
189,863	Johnson, Abiram, Cumberland, Ohio. Food-steamer	Apr. 24, 1877	888	272	11	699
187,283	Johnson, Albert W., assignor of one-half interest to J. Matthewman, New Haven, Conn. Excavating apparatus	Feb. 13, 1877	366	117	11	264
194,873	Johnson, Albert W., New Haven, Conn. Vapor-burner	Sept. 4, 1877	115	36	12	416
188,055	Johnson, Alonzo, Springfield, Mass. Nut-lock	Mar. 6, 1877	97	29	11	393
192,121	Johnson, Andrew J., Cleveland, Ohio. Ear for tubs, &c.	June 19, 1877	627	191	11	1076
	Johnson, Andrew L. (*See* Tegnander, Conrad S., assignor.)					
197,034	Johnson, Augustus, Morrison, Ill. Lift-pump	Nov. 13, 1877	314	93	12	813
194,095	Johnson, Benson W., assignor to W. V. Daboll, Providence, R. I. Carpet-sweeper	Aug. 14, 1877	314	93	12	284
192,373	Johnson, Bradbury M., Brooklyn, N. Y. Pressure-gage	June 26, 1877	912	274	11	1125
7,538	Johnson, Camillus M., New York, N. Y. Pencil-case.....(Reissue)	Feb. 27, 1877	1063	328	11	372
191,684	Johnson, Charles, Groton, N. Y. Floting and polishing iron	June 5, 1877	165	51	11	998
	Johnson, Charles A. (*See* Johnston & Johnson.)					
188,916	Johnson, Charles D., and L. F. Johnston, Marshalltown, Iowa. Wire-fence	Mar. 27, 1877	973	298	11	536
191,152	Johnson, Charles E., Indianapolis, Ind. Garment-holding device	May 22, 1877	1072	321	11	910
7,549	Johnson, Daniel A., Boston, Mass., assignor of part interest to J. F. Pray and C. H. Kendall. Attaching hubs to axles.....(Reissue)	Mar. 6, 1877	266	82	11	415
197,637	Johnson, Edward, Blackheath, and J. Robey, Greenwich, England. Manufacture of a filtering medium for the purification of water, &c	Nov. 27, 1877	965		12	925
190,869	Johnson, Edward A., East Haven, Conn., assignor to self and J. J. Torrer, Brooklyn, N. Y. Screw-driver handles	May 15, 1877	781	231	11	864
191,434	Johnson, Edward C., Williamsport, Pa. Packing for rotary engines	May 29, 1877	1347	408	11	956
190,596	Johnson, Edward H., Brooklyn, assignor of one-half interest to Griffith & Byrne, New York, N. Y. Paper-feeding machine	May 8, 1877	495	147	11	819
191,435	Johnson, Edwin G., Milan, Ohio. Railway-ticket	May 29, 1877	1347	408	11	956
189,228	Johnson, Enoch M., assignor to self and J. E. Sampsel, Pittsburg, Pa. Spark-arrester	Apr. 3, 1877	193	66	11	584
191,154	Johnson, Ephraim S., Jersey City, N. J. Pen	May 22, 1877	1074	322	11	911
197,140	Johnson, Erik, assignor to T. K. Webster, Chicago, Ill. Elevator-bucket	Nov. 13, 1877	427	126	12	830
191,057	Johnson, Ferdinand, Toledo, Ohio. Stone-drilling machine	May 22, 1877	986	293	11	899
191,058	Johnson, Frank G., New York, N. Y. Device for supporting shelves	May 22, 1877	987	293	11	899
189,469	Johnson, Franklin M., assignor of one-half interest to W. M. Cocke, jr., Asheville, N. C. Churn-dasher	Apr. 10, 1877	459	144	11	626
195,714	Johnson, George, Buffalo, N. Y. Jet pipe for gas-lamps	Oct. 2, 1877	23	7	12	564
191,593	Johnson, George F. and T. T. Keeley, Washington, Iowa. Honey-box	June 5, 1877	76	23	11	986
	Johnson, George H., *et al.* (*See* Boudren, Thomas, assignor).....(Reissue.)					
188,297	Johnson, George K., jr., Philadelphia, Pa. Umbrella-tip cup	Mar. 13, 1877	340	106	11	432
188,145	Johnson, Henry B., assignor of two-thirds interest to J. R. McPherson and F. N. Davis, Beloit, Wis. Steam vacuum-pump	Mar. 6, 1877	177	54	11	404
	Johnson, Henry C. (*See* Johnson, Thomas W., assignor.)					
196,094	Johnson, Henry C., Meadville, Pa. Apparatus for aging whisky and other spirits	Oct. 16, 1877	430	125, 126	12	637
190,718	Johnson, Isaac D., Kennett's Square, Pa. Litting-jack	May 15, 1877	648	192	11	846
194,043	Johnson, James, Pittsburg, Pa. Glass-furnace	Aug. 14, 1877	263	78	12	277
186,735	Johnson, James B., assignor of one-half interest to E. G. Hight and E. F. Littlefield, Boston, Mass. Rock-drill	Jan. 30, 1877	932	289, 290	11	169
186,842	Johnson, James B., assignor of one-half interest to E. G. Hight and E. F. Littlefield, Boston, Mass. Tripod for rock-drills	Jan. 30, 1877	1046	323	11	183
186,843	Johnson, James H., assignor of one-half interest to L. A. Osborn, Newark, N. J. Attachment for boots and shoes	Jan. 30, 1877	1047	323	11	183

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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187,761	Johnson, Job, Brooklyn, N. Y. Safety-car	Feb. 27, 1877	859	268	11	345
188,056	Same.....Car-brake	Mar. 6, 1877	97	29	11	393
192,170	Same.....Tubular girder and beam	June 19, 1877	674	266	11	1082
192,171	Same.....Bulk-head and pier	June 19, 1877	675	267	11	1082
	Johnson, John, *et al.* (*See* Horton, Emmet, assignor.)					
	Johnson, John. (*See* Ough, Lloyd & Johnson.)					
193,710	Johnson, John, Brooklyn, N. Y. Lubricating compound	July 31, 1877	1213		12	211
198,116	Johnson, John, Pana, Ill. Check-rower	Dec. 11, 1877	411	128	12	1014
191,346	Johnson, John C., Philadelphia, Pa. Aerated-water fountain	May 29, 1877	1268	382	11	946
196,559	Johnson, John C., Richmond, Canada, assignor of part of interest to R. D. Morkill, jr., and E. Dale, Sherbrooke, and T. Hart, Richmond, Canada. Vacuum railway-brake	Oct. 23, 1877	807	232	12	699
198,515	Johnson, John H., Chicago, Ill. Hose-nozzle	Dec. 25, 1877	844	257	12	1092
192,374	Johnson, John P., Acton, Minn. Grain-binder	June 26, 1877	912	{274 275}	11	1125
189,627	Johnson, John S. W., Camden, N. J. Water-engine	Apr. 17, 1877	631	195	11	657
198,623	Johnson, John W., assignor to self, C. M. Manville, and E. C. Buffington, Towanda, Pa. Grain-winnower	Dec. 25, 1877	948	289	12	1108
188,246	Johnson, Jonathan, Lowell, Mass. Spectacles	Mar. 13, 1877	292	91	11	425
197,859	Same.....Water-meter	Dec. 4, 1877	150	46	12	967
191,153	Johnson, Joseph, Marshalltown, Iowa. Wire-cutter	May 22, 1877	1673	321	11	911
197,860	Johnson, Joseph B., Lynn, Mass. Sand-paper roller for buffing shoe-soles	Dec. 4, 1877	152	46	12	967
191,240	Johnson, Kendal S., Town-Line, N. Y. Fence	May 29, 1877	1177	353	11	933
197,517	Johnson, Labanton, Bradford, Mass. Shoe	Nov. 27, 1877	840	251	12	907
193,962	Johnson, Lenson, Vincennes, Ind. Axle-lubricator	Aug. 7, 1877	161	49	12	257
186,736	Johnson, Luther A., New York, N. Y. Ventilating buildings	Jan. 30, 1877	935	290	11	169
	Johnson, M. Carlyle. (*See* Bishop & Johnson.)					
188,466	Johnson, M. Carlyle, assignor of one-half interest to J. R. Reynolds, Hartford, Conn. Screw-cap	Mar. 20, 1877	521	161	11	465
195,713	Johnson, M. Carlyle, assignor of one-half interest to W. N. Woodruff, Hartford, Conn. Screw-cutting die	Oct. 2, 1877	22	6	12	564
194,094	Johnson, Michael, New Orleans, La. Button-fastening	Aug. 14, 1877	314	92	12	284
191,436	Johnson, Milton C., Brooklyn, N. Y. Bank check-book	May 29, 1877	1348	409	11	956
188,917	Johnson, Moses, Lockport, N. Y. Hand garden-weeder	Mar. 27, 1877	974	298	11	536
192,697	Johnson, Moses, assignor of one-half interest to M. C. Richardson, Lockport, N. Y. Digger and weeder	July 3, 1877	148	41	12	33
192,764	Same.....Hoe	July 3, 1877	204	58	12	40
197,638	Johnson, Moses, assignor to Union Manufacturing Company, Three Rivers, Mich. Cultivator-tooth	Nov. 27, 1877	966	287	12	925
197,731	Johnson, Moses, assignor of one-half interest to M. C. Richardson, Lockport, N. Y. Garden-weeder	Dec. 4, 1877	23	7	12	950
195,018	Johnson, Moses C., Hartford, Conn., assignor to W. Parker, New York, N. Y. Clutch for stopping and starting machinery	Sept. 11, 1877	274	83	12	445
194,353	Johnson, Nelson S., Fiat, Ill. Harrow	Aug. 21, 1877	598	179	12	328
185,931	Johnson, Orson D., and J. F. Bracket, assignors to selves and C. C. Mason, Mount Pulaski, Ill. Rotary stalk-holder	Jan. 2, 1877	122	36	11	24
196,582	Johnson, Robert M., Hainesport, N. J. Combined shutter fastener and bower	Oct. 30, 1877	953	276	12	720
186,935	Johnson, Samuel H., Stratford, England. Manufacture of glucose	Feb. 6, 1877	22	10	11	205
	Johnson, Seth W. (*See* Foyh, Henry, assignor.)					
195,612	Johnson, Thomas, and H. Hanson, Highland, Minn. Drill-rod grappling-hook	Sept. 25, 1877	880	261	12	548
197,861	Johnson, Thomas, assignor to Buckeye Sewer Pipe Company, Akron, Ohio. Making earthenware vessels	Dec. 4, 1877	153	46	12	967
187,468	Johnson, Thomas W., New York, assignor to H. C. Johnson, Astoria, N. Y. Apparatus for extracting tannin	Feb. 20, 1877	564	{174 175}	11	297
189,468	Johnson, Victor, assignor of one-half interest to J. W. Hampton, Mount Pleasant, Iowa. Lifting-jack	Apr. 10, 1877	458	144	11	626
186,135	Johnson, Wilberforce, Camden, N. J. Valve-gear	Jan. 9, 1877	312	97	11	59
197,276	Johnson, Wiley J., Hernando, Miss. Gin-saw-filing machine	Nov. 20, 1877	580	171	12	860
190,439	Johnson, William, assignor of one-half interest to J. Kelner, Milwaukee, Wis. Mill-stone-driver	May 8, 1877	342	109	11	799
190,764	Johnson, William, Lambertville, N. J. Washing-machine	May 15, 1877	690	203	11	851
191,973	Johnson, William A., assignor to Johnson & Son, Westfield, Mass. Reed-pipe for organs	June 12, 1877	454	141	11	1041
186,425	Johnson, William H., assignor of one-half interest to G. E. Marvine, Delhi, N. Y. Metal neck-yoke	Jan. 23, 1877	636	194	11	119
192,765	Johnson, William H., assignor of one-half interest to H. P. Ustick, Madison County, Ohio. Flood-fence	July 3, 1877	205	59	12	40
197,554	Johnson, William J., Newton, Mass. Wire-stand for picture-holders	Nov. 27, 1877	881	262	12	913
	Johnson, William M. (*See* Ruch, Jacob, assignor.)					
193,709	Johnson, William W., Nashville, Tenn. Metallic seal	July 31, 1877	1212	363	12	211
198,393	Johnston, Edward H., assignor to Wharton Railway Switch Company, Philadelphia, Pa. Railway-crossing	Dec. 18, 1877	711	216	12	1064
187,016	Johnston, Elizabeth B., Germantown, Ky. Device for killing mosquitoes	Feb. 6, 1877	99	33	11	215
191,972	Johnston, George, Detroit, Mich. Eye-glasses	June 12, 1877	454	140	11	1041
195,135	Johnston, George, and L. Conrath, Detroit, Mich. Optometer	Sept. 11, 1877	393	118	12	463
186,479	Johnston, George, J. Cairns, and M. K. Johnston, Caldwell, Tex. Cotton-stalk cutter	Jan. 23, 1877	688	211	11	126
	Johnston Harvester Company. (*See* Cooley, Orville, assignor.)					
194,246	Johnston, James, Paterson, N. J. Nut-machine	Aug. 14, 1877	475	143	12	305
	Johnston, James A. (*See* Hopkins & Johnston.)					
198,200	Johnston, James G., Washington, D. C., assignor of one-half interest to W. Sickels, Hamilton, Mich. Paper-fastener	Dec. 18, 1877	518	160	12	1036
	Johnston, James J. (*See* Davis, Andrew J., assignor.)					
193,120	Johnston, James J., Columbiana, Ohio. Process and apparatus for leaching tan-bark	July 17, 1877	590	178	12	108
192,698	Johnston, James K., Saint Louis, Mo. Burglar-alarm	July 3, 1877	149	42	12	33
192,870	Johnston, John, Iona, Canada. Car-coupling	July 10, 1877	338	100	12	66
187,865	Johnston, John L., Shorbrooke, Canada. Fluid meats	Feb. 27, 1877	966		11	359
198,624	Johnston, John S., and C. A. Johnson, Rockford, Ill. Cultivator	Dec. 25, 1877	949	290	12	1108
190,763	Johnston, John W. and R., Ferrysburg, Mich. Machine for shearing boiler-plates	May 15, 1877	689	203	11	851
	Johnston, Levi F. (*See* Johnson & Johnston.)					
	Johnston, Lysander (*See* Coulter, Columbus M., assignor.)					
	Johnston, Melville M. (*See* Curtis, Charles M., assignor)	(Reissue.)				
	Johnston, Michael K. (*See* Johnston, Cairns & Johnston.)					
	Johnston, Robert. (*See* Johnston, John W. and R.)					
193,121	Johnston, Samuel, Brockport, N. Y. Harvester-rake	July 17, 1877	591	178	12	108
197,221	Johnston, William, Marinette, Wis. Thill-coupling	Nov. 20, 1877	527	155	12	852

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
191,971	Johnston, William K., Cordova, Ill., assignor of one-half interest to C. L. Maxwell, Princeton, Iowa. Liquid measure	June 12, 1877	453	140	11	1041
192,372	Johnston, Willis Waterloo, Iowa. Butter-worker	June 26, 1877	911	274	11	1125
193,091	Johntry, Jacob A., Brooklyn, N. Y. Spring-bed	July 17, 1877	565	170	12	104
	Joliet Wire Fence Company. (*See* Scott, Hiram B., assignor.)					
196,867	Joliffe, William H., and T. C. Schneider, Baltimore, Md. Hose and pipe coupling	Nov. 6, 1877	70	21	12	770
190,765	Jolly, Thomas J., Etna, Mo. Shot bag and charger	May 15, 1877	680	204	11	851
189,105	Jonasson, Bengt A., Warren, Pa. Smoking-pipe	Apr. 3, 1877	83	29	11	570
192,766	Jouassou, Meyer, New York, N. Y. Device for turning or folding the edges of fabrics. Jones & Laughlins. (*See* Atkinson, James S., assignor.)	July 3, 1877	206	59	12	41
196,670	Jones, Asa, assignor of one-half interest to J. H. Dail, Snow Hill, N. C. Cultivator	Oct. 30, 1877	1037	301	12	742
	Jones, Benjamin F. (*See* Atkinson, James S., assignor.)					
188,146	Jones, Benjamin F., Beauregard, Miss. Trace-fastening	Mar. 6, 1877	178	54	11	404
191,437	Jones, Byron, assignor of one-half interest to T. L. Graves, Kendallville, Ind. Crane	May 29, 1877	1349	400	11	956
190,495	Jones, Charles L., Stoughton, Mass. Edge-ball compound for boots and shoes	May 8, 1877	398		11	806
	Jones, Charles P., *et al.* (*See* Jones, George F., assignor.)					
192,513	Jones, Charles W., Centreville, and E. A. Jones, Sturgis, Mich. Fruit-drier	June 26, 1877	1049	316	11	1143
	Jones, Claudius. (*See* Morris, John H., assignor.)					
191,155	Jones, David, Youngstown, Ohio. Gear-wheel	May 22, 1877	1075	322	11	911
189,470	Jones, Ebn, Winterset, Iowa. Zinc board for stoves	Apr. 10, 1877	460	145	11	626
	Jones, Edgar A. (*See* Jones, Charles W. and E. A.)					
193,711	Jones, Edward C., Independence, Mo. Grain-steamer	July 31, 1877	1213	364	12	211
194,824	Jones, Edward D. G., Pittsfield, Mass. Rag-engine	Sept. 4, 1877	69	23	12	410
191,594	Jones, Edward S., Pulaski, Tenn. Car-brake	June 5, 1877	76	23	11	987
195,019	Jones, Eleanor W., Cleveland, Ohio. Dough-mixer	Sept. 11, 1877	275	84	12	445
197,518	Jones, Ellis T., assignor to self and W. G. Kelsall, Norwich, Conn. Hand-stamp for tickets	Nov. 27, 1877	840	251	12	967
190,428	Jones, Eran J., Indianapolis, Ind., assignor to E. F. Cullen, L. C. Riggs, and D. Elstner, Chicago, Ill. Device for supplying a steam and air blast to furnaces	May 29, 1877	1350	409	11	975
192,264	Jones, Evan, Ottumwa, Iowa. Pump	June 19, 1877	779	237	11	1095
191,439	Jones, Francis W., Chicago, Ill. Quadruplex telegraph	May 29, 1877	1351	409, 410	11	957
191,440	Same.....same	May 29, 1877	1354	410	11	975
	Jones, George A. (*See* Robinson, Azel T., assignor.)					
187,284	Jones, George F., assignor to C. P. Jones; said G. F. and C. P. Jones assignors to selves and H. A. and E. P. Kingsbury, Scranton, Pa. Bale-tie	Feb. 13, 1877	367	117	11	264
	Jones, George R. G. (*See* Seehausen, Herman, assignor.)					
188,467	Jones, George S., Brookfield, Ohio. Lifting-jack for carriages, &c	Mar. 20, 1877	522	161	11	496
	Jones, George W. (*See* Maxwell, David N., assignor.)					
186,256	Jones, Gilbert E., New York, N. Y. Machine for winding up fabrics	Jan. 16, 1877	440	135	11	82
196,621	Same.....Machine for folding and cutting paper and other materials	Oct. 9, 1877	342	97, 98	12	617
192,376	Jones, Griff. T., Nashville, Tenn. Evaporating-pan	June 26, 1877	917	275	11	1125
193,255	Jones, Griffith W., assignor of one-half interest to W. McIlvain & Sons, Reading, Pa. Portable grinding-machine for plate and other rolls	July 17, 1877	724	221	12	126
186,844	Jones, Henry, Coshocton, Ohio. Corn-planter	Jan. 30, 1877	1048	323, 324	11	183
189,106	Jones, Henry, East Saginaw, Mich. Sash-fastener	Apr. 3, 1877	83	30	11	570
194,602	Jones, Henry, Cuyahoga Falls, Ohio. Middlings-separator	Aug. 28, 1877	843	251	12	371
196,908	Jones, Henry, Coshocton, Ohio. Corn-planter	Nov. 6, 1877	178	52	12	785
190,870	Jones, Henry M., West Meriden, Conn. Pump	May 15, 1877	781	731	11	864
194,354	Jones, Henry T., Catskill, N. Y. Milk-strainer	Aug. 21, 1877	599	179	12	328
187,695	Jones, Horace C., Dowagiac, Mich. Stave-basket	Feb. 20, 1877	772	240	11	325
	Jones, Jacob G. (*See* Cook & Jones.)					
198,394	Jones, J. Albert, Marcellus, Mich. Heating-stove	Dec. 18, 1877	711	216	12	1064
	Jones, James C., *et al.* (*See* Jacobson, Christian F., assignor.)					
190,333	Jones, James C., New York, N. Y. Refrigerating oyster package	May 1, 1877	216	64	11	774
185,932	Jones, James H., assignor to R. Emerson and W. A. Talcott, Rockford, Ill. Cultivator	Jan. 2, 1877	122	37	11	24
187,712	Jones, James M., assignor of one-half interest to H. W. Howe, Lawrence, Kans. Miter-box	Feb. 27, 1877	816	253	11	339
	Jones, J. Emory. (*See* Sprague, Austin V. M., assignor.)					
191,347	Jones, John, assignor of two-thirds interest to S. B. Holly and W. H. Magoon, Stony Point, Cal. Cultivator	May 29, 1877	1269	383	11	946
195,510	Jones, John B., Brooklyn, N. Y. Tinning apparatus	Sept. 25, 1877	788	233	12	535
	Jones, John H. (*See* Rich, Francis A., assignor.)					
188,373	Jones, John H., and C. Walker, Buffalo, N. Y. Fastener for keg-covers	Mar. 13, 1877	419	130	11	443
196,460	Jones, John L., Greensborough, N. C. Plug-tobacco-making machine	Oct. 23, 1877	807	233	12	699
198,117	Same.....Plug-tobacco	Dec. 11, 1877	412		12	1015
183,642	Jones, John M., assignor of one-half interest to W. Allen, Philadelphia, Pa. Spring-hinge	Mar. 20, 1877	684	211	11	483
197,141	Jones, John T., Ilion, N. Y. Sewing-machine	Nov. 13, 1877	428	126	12	830
195,288	Jones, Joseph B., Philadelphia, Pa. Washing-machine	Sept. 18, 1877	564	164	12	495
187,640	Jones, Levin T., Baltimore, Md. Stud and bearing for sewing-machines, &c	Feb. 20, 1877	725	225	11	38
196,907	Same.....Bearing for shafts	Nov. 6, 1877	178	52	12	785
189,940	Jones, Luther, and J. Stroud, New York, N. Y. Sash-holder	Apr. 24, 1877	965	295	11	709
197,277	Same.....same	Nov. 20, 1877	581	172	12	860
194,439	Jones, Martin K., Dubuque, Iowa. Grain-cleaner and millstone-exhaust	Aug. 21, 1877	681	203, 204	12	339
195,511	Jones, Moses, Hymer, Kans. Stove	Sept. 25, 1877	789	233	12	535
196,808	Jones, N. A. T., Plymouth, assignor of three-fourths interest to W. W. P. and G. L. Allen, Worcester, Mass. Feed-water heater and purifier	Nov. 6, 1877	70	21	12	770
197,375	Jones, Nathaniel, Syracuse, N. Y. Car-axle	Nov. 20, 1877	679	203	12	876
197,639	Same.....Truss	Nov. 27, 1877	966	288	12	925
186,577	Jones, Needham B., Guthrie, N. Y. Tobacco-press	Jan. 23, 1877	777	240	11	138
186,424	Jones, Owen, Gloucester, Mass. Look out pole for seine-boats	Jan. 23, 1877	635	194	11	119
189,360	Jones, Owen, Philadelphia, Pa. Revolving fire-arm	Apr. 10, 1877	356	115	11	613
188,372	Jones, Preston, Adams, Ind., assignor of one-half interest to H. B. Collins, Newport, Ky. Fence-post	Mar. 13, 1877	418	130	11	442
186,936	Jones, Reuben, Wilbraham, Mass. Sewing-machine	Feb. 6, 1877	25	10	11	205
188,298	Jones, Richard, Boston, assignor to W. Douglass, Rockland, Mass. Coach-wrench	Mar. 13, 1877	341	107	11	432
197,142	Jones, Robert R., Asheville, N. C. Truss	Nov. 13, 1877	430	127	12	830
191,860	Jones, Samuel S., Norristown, Pa. Gas-regulator	June 12, 1877	343	106	11	1027
194,874	Jones, Theodore J. Earl, assignor of one-half interest to W. Van Deventer, Earlville, Ill. Door-hanger	Sept. 4, 1877	116	36	12	417

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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189,104	Jones, Theodore R., Utica, N. Y. Spring bed-bottom	Apr. 3, 1877	81	29	11	570
194,553	Jones, Thomas B., Madisonville, Ky. Plow	Aug. 28, 1877	803	239	12	365
7,585	Jones, Thomas L., Natchez, Miss. Combined high and low pressure engine. (Reissue)	Apr. 3, 1877	271	89	11	594
7,805	Same.....Valve-gear for combined high-pressure and condensing engines. (Reissue)	July 24, 1877	1072	321	12	181
194,440	Jones, Thomas L., Natchez, Miss., assignor of two-thirds interest to T. P. Leathers, New Orleans, La., and J. P. Keiser, Saint Louis, Mo. Steam-generator	Aug. 21, 1877	682	204	12	339
193,764	Jones, Warren, Berlin, Wis. Horse-detaching apparatus	July 31, 1877	1264	{379 380	12	219
	Jones, William. (*See* Powers, Charles T., assignor.)					
	Jones, William, *et al.* (*See* Wells, William, assignor.)					
188,801	Jones, W. Davidson, assignor of one-half interest to H. H. Pawling, Hagaman's Mills, N. Y. Apparatus for manufacturing hydrated sulphurous acid	Mar. 27, 1877	861	262	11	520
197,474	Jones, W. Davidson, Hagaman's Mills, N. Y. Apparatus for manufacturing hydrated sulphurous acid	Nov. 27, 1877	792	237	12	901
	Jones, William R., *et al.* (*See* Wells, William, assignor.)					
186,576	Jones William R., Braddock's, Pa. Compressing ingots while casting	Jan. 23, 1877	776	240	11	138
189,471	Jones, William R., Braddock's, assignor to Thomson Steel Company, limited, Pittsburg, Pa. Hot-bed for bending railway-rails	Apr. 10, 1877	461	145	11	626
191,974	Jones, William R., Braddock's, Pa. Wash for ingot-molds	June 12, 1877	455		11	1041
193,963	Same.....Machine for sawing metal bars	Aug. 7, 1877	161	50	12	257
197,376	Same.....Hot-bed for rails	Nov. 20, 1877	680	203	12	876
188,643	Jordan, August C., Pittsburg, and C. Konold, Evergreen Hamlet, Pa. Machine for forming the eyes of picks	Mar. 20, 1877	684	211	11	488
	Jordan, George A. (*See* Earle, Anthony I., assignor.)					
	Jordan, James C., *et al.* (*See* Andrews & Tucker, assignors) (Reissue.)					
	Jordan, William M. (*See* Brown, Mercileus P., assignor.)					
186,009	Jordan, William T., Chagrin Falls, and P. Mequillet, Cleveland, assignors to Adams & Co., Chagrin Falls, Ohio. Paper bag	Jan. 9, 1877	201	61	11	44
	Jordon, Robert J. (*See* Brooks & Jordon.)					
197,475	Josef, Philip P., assignor to self, J. F. Haberstro, and G. E. Schneider, Buffalo, N. Y. Machine for planing wood	Nov. 27, 1877	795	237	12	901
	Joslin, Isaac R. (*See* Kidder, Richard E., assignor.)					
187,388	Joslyn, Benjamin F., Worcester, Mass., assignor to R. P. Bruff, New York, N. Y. Wood-boring machine	Feb. 13, 1877	469	147	11	{277 278
192,920	Same.....Wrench	July 10, 1877	383	113	12	72
198,461	Joute, Pierre F., and C. F. Bernard, Cincinnati, Ohio. Motor	Dec. 25, 1877	790	240	12	1085
	Jowers, John F. (*See* Cameron & Jowers.)					
195,930	Jowitt, James, assignor to G. and H. Barnett, Philadelphia, Pa. Holder for articles while being ground	Oct. 9, 1877	254	71	12	604
193,092	Joyce, George F., Brookline, Mass. Latch for doors, &c	July 17, 1877	565	170	12	101
197,476	Joyce, Norma K., Brooklyn, N. Y. Air-register	Nov. 27, 1877	795	237	12	901
186,480	Joyner, Francis H., Branchville, Md. Copy-holder	Jan. 23, 1877	689	211	11	126
198,118	Judd, Albert D. and E. M., New Haven, Conn. Lamp-bracket	Dec. 11, 1877	413	128	12	1015
	Judd, Edward M. (*See* Judd, Albert D. and E. M.)					
194,825	Judd, Oliver S., New Britain, Conn. Sash-fastener	Sept. 4, 1877	70	23	12	410
192,335	Judge, Arthur J., Saint Louis, Mo. Elevator-way	June 26, 1877	876	264	11	1120
188,247	Judkins, Mark D., Osakis, Minn. Plow	Mar. 13, 1877	292	92	11	425
195,375	Same.....Double-acting pump	Sept. 18, 1877	641	190	12	506
	Judson, A. A. (*See* Hinson, James A., assignor.)					
7,729	Judson, Catharine, Newton, Mass. Corset-spring (Reissue)	June 12, 1877	533	164	11	1051
7,481	Judson, Egbert, San Francisco, Cal. Explosive composition (Reissue)	Jan. 30, 1877	1124		11	193
187,017	Judson, Junius, Rochester, N. Y. Governor	Feb. 6, 1877	99	34	11	{215 216
191,348	Judson, Lyman P., East New Market, Md. Barbed fence	May 29, 1877	1270	383	11	946
7,490	Judson, Roswell and J. P. Schenck, jr., Matteawan, assignors to N. Seeley and G. I. Stevens, New York, N. Y. Tin can (Reissue)	Feb. 6, 1877	278	91	11	240
188,147	Judy, Bolivar, Plattsburg, Ohio. Excavating and loading machine	Mar. 6, 1877	179	55	11	404
	Jullien, Edward. (*See* Carre & Jullien).					
	June, David. (*See* Brayton, June & French.)					
	June, Frank T. (*See* Cogger & June.)					
197,640	Jünemann, Henry, Boston, Mass. Compound for clarifying malt-liquors	Nov. 27, 1877	967		12	926
190,334	Jungclas, Augustus, Dayton, Ohio. Coffee-roaster	May 1, 1877	217	65	11	774
187,148	Junker, Anton, and F. W. Wolf, Chicago, Ill. Apparatus for drying distillery-slops	Feb. 6, 1877	217	71	11	232
197,936	Junker, John W., Pittsburg, Pa. Mounting pictures	Dec. 11, 1877	236	72	12	988
	Junkins, Leander, D. (*See* Smith, Albert S., assignor.)					
195,512	Jurden, Oscar, Ackley, Iowa. Washing-machine	Sept. 25, 1877	790	233	12	535
195,289	Jury, Thomas J., Spencer, Ind. Lamp-bracket	Sept. 18, 1877	565	164	12	495
188,057	Just, Isaac N., Belding, Mich. Harness-trimming	Mar. 6, 1877	98	29	11	394
194,687	Justice, Francis E., Marysville, Ohio. Thill-coupling	Aug. 28, 1877	923	274	12	381
	Justice, Philip S. (*See* Shaw, Thomas, assignor) (Reissue.)					
194,777	Juston, Ursin, Paris, France. Electrical semaphore	Sept. 4, 1877	23	6, 7, 8	12	403
189,042	Juvet, Louis P., Glens Falls, N. Y. Time-globe	Apr. 3, 1877	49	10	11	563
191,288	Kachin, William, Cleveland, Ohio. Straw-cutter	May 29, 1877	1223	367	11	939
190,335	Kade, Charles, Saint Louis, Missouri. Sofa-bedstead	May 1, 1877	218	65	11	775
191,059	Kagey, Charles I., and F. W. Stoneburner, Arcola, Ill. Baking-pan	May 22, 1877	988	293	11	899
196,298	Kahler, Conrad, and J. Biebl, Chicago, Ill., assignors to F. B. Williams. Paper-damping apparatus	Oct. 23, 1877	656	190	12	677
189,229	Kahn, Jules, New York, N. Y. Clothes-drier	Apr. 3, 1877	194	66	11	585
192,832	Kahnweil, David, New York, N. Y. Life-preserver	July 10, 1877	304	89	12	62
195,613	Kaiser, Andrew, assignor of one-half interest to H. R. Kent, Prophetstown, Ill. Sand-band for vehicles	Sept. 25, 1877	881	262	12	549
	Kaiser, Charles. (*See* Braunsdorf & Kaiser.)					
192,336	Kaiser, William, Wilkesbarre, Pa. Hydrant	June 26, 1877	877	261	11	1120
190,496	Kaldenburg, F. Julius, New York, N. Y. Umbrella-handle	May 8, 1877	398	116	11	806
187,977	Kalstrom, Andrew, Middlebrook, Mo. Bath for tempering steel	Mar. 6, 1877	22		11	383
	Kamak, Max. (*See* Aldom, Edward, assignor.)					
187,389	Kamerer, Paul, Chattanooga, Tenn. Chair	Feb. 13, 1877	470	147	11	278
189,742	Kamlah, Charles, Jersey City Heights, N. J. Attachment for wash-boilers	Apr. 17, 1877	749	239	11	672
	Kampf, George. (*See* Downer & Kampf.)					
	Kamping, F. W. (*See* Stossmeister, Albert W., assignor.)					
189,361	Kane, Bart., Cincinnati, assignor to J. Lyons, Lockland, Ohio. Strap-lock	Apr. 10, 1877	357	115	11	613
186,348	Kane, Frank H., Syracuse, N. Y. Machine for cutting pins, dowels, &c	Jan. 16, 1877	544	165	11	95

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No.	Name, residence, and invention	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
196,461	Kane, John H., assignor to W. J. Munsell, Amsterdam, N. Y. Bosom-board	Oct. 23, 1877	811	233	12	699
	Kane, Thomas. (*See* Durant & Kane.)					
188,918	Kanuse, Samuel T., Taunton, Mass. Towel-rack	Mar. 27, 1877	975	298	11	536
189,230	Kappe, William J. H., Quincy, Ill. Egg-carrier	Apr. 3, 1877	195	66	11	585
190,440	Same.....Egg-crate	May 8, 1877	343	100	11	799
188,958	Karelsen, Jacques E., New York, N. Y. Glazier's diamond-holder	Mar. 6, 1877	99	30	11	394
185,933	Karr, Francis M., Winterset, Iowa. Washing-machine	Jan. 2, 1877	127	37	11	24
7,739	Karr, Watson, Frostburg, Md. Preventing the accumulation of carbon in retorts. (Reissue)	June 12, 1877	544		11	1053
187,866	Same.....Preventing the accumulation of carbon in retorts	Feb. 27, 1877	966		11	359
196,152	Karsner, Adam E., Florida, Ohio. Roof and stock-pen for platform-scales	Oct. 16, 1877	494	143, 144	12	646
197,862	Kasiske, Friedrich, North Freedom, Wis. Coffee-roaster	Dec. 4, 1877	154	47	12	968
187,641	Kast, Ernst, assignor of two-thirds interest to L. Wenzel and E. Miller, Waterbury, Conn. Cigar-cutter	Feb. 20, 1877	726	225	11	319
195,376	Kast, Joseph, assignor of part interest to T. Stone, F. Ewens, and C. F. Bitter, Buffalo, N. Y. Apparatus for rectifying spirits	Sept. 18, 1877	641	190	12	507
186,136	Katon, Walter, and P. Bonfils, North Attleborough, Mass. Velocipede	Jan. 9, 1877	320	98	11	59
195,931	Kator, George, Northville, Mich. Butter-package	Oct. 9, 1877	255	71	12	604
193,875	Katz, Solomon and W. New York, N. Y. Cap	Aug. 7, 1877	71	23	12	244
	Katz, William. (*See* Katz, Solomon and W.)					
195,894	Kauffmann, Samuel, Evanston, Ill. Overalls	Oct. 9, 1877	214	60	12	599
191,685	Kaufholz, John N., Chattanooga, Tenn. Machine for making valve-buckets for pumps	June 5, 1877	165	51	11	998
197,035	Same.....Reciprocating engine	Nov. 13, 1877	315	94	12	813
197,143	Same.....Journal-bearing	Nov. 13, 1877	431	127	12	830
193,162	Kaufmann, Abraham, New York, N. Y. Handle attachment for carpet-bags and satchels	July 17, 1877	625	189	12	113
189,628	Kautz, George J., Emporium, Pa. Sawing-machine	Apr. 17, 1877	632	196	11	657
198,025	Same.....Circular-sawing machine	Dec. 11, 1877	322	99, 100	12	1001
196,583	Kavanaugh, Richard W., Chaplin, Ky. Apparatus for teaching arithmetic	Oct. 30, 1877	954	276	12	730
196,671	Kay, Allan B. and R. A., Newark, N. J. Hardening plaster of Paris	Oct. 30, 1877	1038		12	742
	Kay, Robert A. (*See* Kay, Allan B. and R. A.)					
7,854	Kayser, Adolph, Buffalo, N. Y., assignor, by mesne assignments, to Kayser Gas Generator Company. Carbonic-acid-gas generator (Reissue)	Aug. 21, 1877	756	225	12	349
186,089	Kayser, Adolph, assignor to P. P. Pratt, Buffalo, N. Y. Carbonic-acid-gas generator	Jan. 9, 1877	274	83	11	54
	Kayser Gas Generator Company. (*See* Kayser, Adolph, assignor.) (Reissue.)					
	Keagle, Levi S. (*See* Wilson & Keagle.)					
	Keagy, David F. (*See* Crotzer, William, assignor.)					
	Kear, George W. (*See* Sax & Kear.) (Reissue.)					
185,934	Kearney, George F., Gorham, N. Y. Game device	Jan. 2, 1877	128	38	11	24
198,201	Kearns, Isaac F., and G. Jenson, Chicago, Ill. Die for cutting and forming metal can tops and covers	Dec. 18, 1877	518	160	12	1036
198,119	Kearns, Richard A., W. D. Lewis, and W. M. Jenkins, Philadelphia, Pa. Brick-machine and mold	Dec. 11, 1877	414	129	12	1015
192,514	Keating, Daniel E., assignor to self, D. Pickman, and G. W. Cross, Lowell, Mass. Let-off mechanism for covers	June 26, 1877	1051	316	11	1143
	Keating, Thomas F., *et al.* (*See* Atwood, Corydon F., assignor.) (Reissue.)					
186,137	Keating, Thomas F., and W. H. Taylor, assignors to Yale Lock Manufacturing Company, Stamford, Conn. Sash-fastener	Jan. 9, 1877	321	98	11	59, 60
191,861	Keating, Thomas F., and W. H. Taylor, Stamford, Conn. Door-lock	June 12, 1877	341	106	11	1027
	Keats, John. (*See* Batley, Keats & Neil.)					
7,806	Keats, John, Middlesex County, and W. S. Clark, Street; said Clark assignor to J. Batley, London, England. Sewing-machine (Reissue)	July 24, 1877	1074	321, 322	12	181
191,975	Keats, John, Wood Green, England. Sewing-machine	June 12, 1877	456	141	11	1041
193,517	Same.....Machine for channeling the soles of boots and shoes	July 24, 1877	1002	302	12	172
193,712	Same.....Felting-machine	July 31, 1877	1214	364	12	211
193,964	Same.....Button	Aug. 7, 1877	163	50	12	257
198,120	Same.....Machine for sewing boots and shoes	Dec. 11, 1877	416	129, 130	12	1015
189,231	Keech, Thomas, New York, N. Y. Apparatus for giving hot-air and other baths	Apr. 3, 1877	196	66, 67	11	585
189,743	Same..... Car-heater	Apr. 17, 1877	750	230	11	672
196,153	Keeffe, Daniel F., Glens Falls, N. Y. Sash-holder	Oct. 16, 1877	495	141	12	646
191,804	Keegan, James D., and A. Lubes, New York, N. Y. Drive-cock for water-mains	June 12, 1877	287	89	11	1021
187,018	Keehner, Charles, Roseville Junction, Cal. Harrow	Feb. 6, 1877	109	34	11	216
189,472	Keeler, Julius M., San Francisco, Cal. Fruit-drier	Apr. 10, 1877	463	145	11	627
	Keeley, Oliver B. (*See* Shantz, Enos S., assignor.)					
190,871	Keeley, Oliver B., and J. Fleming, Spring City, assignors to selves and E. S. Shantz, Philadelphia, Pa. Rock-drilling machine	May 15, 1877	782	232	11	864
194,688	Keeley, Philip, Saint Mary, Minn. Horse-power	Aug 28, 1877	923	275	12	381
194,689	Keeley, Philip, Waseca, Minn. Preventing rollers from clogging	Aug. 28, 1877	924	275	12	382
	Keeley, Thomas T. (*See* Johnson & Keeley.)					
195,218	Keely, Nice, Philadelphia, Pa. Roll for paper-barrel machines	Sept. 18, 1877	491	145	12	485
7,485	Keen, Morris L., Stroudsburg, and H. Burgess, Royer's Ford, Pa., assignors to American Wood Paper Company. Process and apparatus for evaporating and calcining alkaline solutions (Reissue)	Jan. 30, 1877	1123	348	11	194
198,625	Keenan, Franklin, Brownsville, N. Y. Rock-drilling machine	Dec. 25, 1877	959	290	12	1108
195,020	Keene, George A., Lynn, Mass. Carriage-step	Sept. 11, 1877	275	84	12	445
188,468	Keene, John W., Newark, N. J. Magazine fire-arm	Mar. 20, 1877	523	161, 162	11	466
	Keep, James M. (*See* Seldon & Keep.)					
	Keep Manufacturing Company. (*See* Hurcombe, John C., assignor.)					
188,640	Keep, Oliver H., New York, N. Y. Shirt	Mar. 20, 1877	680	210	11	488
197,853	Kehl, Anthony, Connersville, Ind. Door-check	Dec. 4, 1877	154	47	12	968
197,379	Keim, Charles J., assignor to C. D. W. Bower and L. H. Lambert, Catasauqua, and B. B. Lynn, Bethlehem, Pa. Car-axle box	Nov. 20, 1877	683	204	12	876
	Keiser, Charles W., *et al.* (*See* Aldridge, Hiram, assignor.)					
192,436	Keiser, Florenz, assignor of one-half interest to H. G. Kulp, Pottstown, Pa. Axle-box	June 26, 1877	970	291	11	1133
	Keiser, John P., *et al.* (*See* Jones, Thomas L., assignor.)					
	Keith, Charles E. (*See* Pickering, Oliver, assignor.)					
7,516	Keith, Jeremiah, Providence, R. I., assignor to H. G. Thompson. Machine for making and setting blind-staples (Reissue)	Feb. 20, 1877	776	212	11	325

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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196,809	Keith, Jeremiah, Providence, R. I. Wax-thread sewing-machine	Nov. 6, 1877	72	22	12	771
193,256	Keith, John, Greenfield, Mass. Clamp for paper-cutting machines	July 17, 1877	726	222	12	126
191,060	Keith, Samuel N., Providence, R. I. Car-coupling	May 22, 1877	988	294	11	899
195,932	Keith, Thomas K., Haverhill, Mass. Feeding mechanism for sewing-machines	Oct. 9, 1877	255	72	12	605
196,909	Keith, Thomas K., assignor to M. How, Haverhill, Mass. Feed mechanism for sewing-machines	Nov. 6, 1877	181	52	12	785
	Keizer, Lewis R. (*See* Painter, William, assignor.)					
	Kek, George F. (*See* Fischer, Kek & Sharp.)					
198,244	Keleher, James, jr., Lawrence, Mass. Return-gear for braiding-machines	Dec. 18, 1877	579	175	12	1041
	Kell, James. (*See* Benade, Charles E., assignor.)					
190,336	Kellam, Daniel C., Detroit, Mich. Damper-regulator for steam-boilers	May 1, 1877	219	65	11	775
	Keller, Charles M., trustee, *et al.* (*See* Carr, William S., assignor) (Reissue.)					
	Keller, Edmond M. (*See* Keller, John H. and E. M.)					
192,172	Keller, George H., Shotwell, Mo. Straw-cutter	June 19, 1877	676	207	11	1082
192,650	Keller, John H. and E. M., Clyde, Ohio. Buggy-top	July 3, 1877	100	29	12	26
191,595	Keller, Joseph, and A. Olmesdahl, New York, N. Y. Fluting-machine	June 5, 1877	77	23	11	987
	Kellett, Simon. (*See* Yates & Kellett.)					
	Kellett, William H. (*See* Yates & Kellett.)					
197,378	Kelley, Charles E., Worcester, Mass., assignor to H. Roberts, Newark, N. J. Fence-barb	Nov. 20, 1877	682	204	12	876
	Kelley, Dennis N., *et al.* (*See* Clingman, John, assignor.)					
188,374	Kelley, George F., Susanville, Cal. Device for unloading and stacking hay, &c	Mar. 13, 1877	420	130	11	443
195,895	Kelley, Jehiel H., Muncie, Ind. Brick kiln	Oct. 9, 1877	215	61	12	599
	Kelley, John C. (*See* Jasper, William, assignor.)					
187,762	Kelley, Thomas B., Harmonburg, Pa. Metallic packing for oil-well pump-valves	Feb. 27, 1877	860	268	11	345
	Kelley, William E. (*See* Browne, Arthur, assignor.)					
191,596	Kelley, William H., Cleveland, Ohio. Bottling-machine	June 5, 1877	78	24	11	987
194,153	Kellner, Joseph, Jersey City, N. J. Fire-escape and spring bed-bottom	Aug. 14, 1877	391	116	12	293
196,299	Kellogg, Charles, Buffalo, N. Y. Machine for making bridge-eyes	Oct. 23, 1877	657	190	12	678
195,715	Kellogg, Charles H., assignor of one-half interest to S. R. and N. C. Newell, East Everett, Mass. Machinery for attaching buttons to cards	Oct. 2, 1877	25	7, 8	12	564
187,469	Kellogg, Clement A., East Palestine, Ohio. Curtain-fixture	Feb. 20, 1877	567	176	11	297
194,154	Kellogg, Eugene P., New York, N. Y. Sleeping-car	Aug. 14, 1877	392	116, 117	12	293
7,569	Kellogg, Henry, New Haven County, Conn., assignor to H. L. Butler, jr. Cartridge. (Reissue)	Mar. 27, 1877	1062	327	11	548
	Kellogg, I. H., *et al.* (*See* Knapp, George S., assignor)					
	Kellogg, Norman G. (*See* Jennings, Ralph S., assignor.)					
	Kellogg, Paulina W. (*See* Westcott, Adriance & Miner, assignors.)					
193,163	Kellogg, William A., Scranton, Pa. Wash-boiler	July 17, 1877	626	190	12	113
196,361	Kellum, John L., assignor to self and D. L. Buckner, Maxwell Station P. O., Tenn. Horse-detacher	Oct. 23, 1877	717	206	12	686
197,377	Kelly, Benjamin F., Shelocta, Pa. Till-check	Nov. 20, 1877	681	204	12	876
	Kelly, Florence J. (*See* Kelly, William, assignor.)					
186,845	Kelly, George B., Boston, Mass. Reed-organ	Jan. 30, 1877	1050	324	11	183
186,846	Kelly, George B., Boston, and O. H. Arno, Cambridge, Mass. Reed-organ coupler	Jan. 30, 1877	1051	324	11	183
186,847	Kelly, George B., Boston, Mass. Reed-organ stop-action	Jan. 30, 1877	1051	324	11	183
186,848	Kelly, George B., and E. L. Rand, Boston, Mass. Reed-organ stop-action	Jan. 30, 1877	1052	325	11	184
186,849	Same.....Reed-organ	Jan. 30, 1877	1054	325	11	184
191,332	Kelly, George B., Boston, and A. K. Hebard, Cambridge, Mass. Reed-organ swell	June 5, 1877	25	7, 8	11	979
188,059	Kelly, Hampton, East Portland, Oreg. Fruit-grinder	Mar. 6, 1877	99	30	11	394
190,685	Kelly, Hampton, and D. Cole, Portland, Oreg. Fruit-drier	May 15, 1877	610	181	11	841
188,375	Kelly, James, assignor of one-half interest to M. Dalton, San Francisco, Cal. Window-sash holder	Mar. 13, 1877	421	131	11	443
188,376	Same.....Metal wedge	Mar. 13, 1877	421	131	11	443
198,245	Kelly, John, Rochester, assignor to J. Snow, Ogden, N. Y. Cake-turner	Dec. 18, 1877	580	175	12	1044
193,093	Kelly, John R., assignor of one-half interest to P. P. Mast and C. O. Gardner, Springfield, Ohio. Grate-bar	July 17, 1877	566	170	12	104
7,643	Kelly, Moses J., Chicago, Ill. Air cooling and distributing apparatus (Reissue)	Apr. 24, 1877	1186	357	11	738
190,497	Kelly, Peter A., Baltimore, Md. Galley-support	May 8, 1877	399	116	11	806
7,629	Kelly, Richard A., Manchester, Iowa. Car-coupling (Reissue)	Apr. 24, 1877	1164	353	11	734
195,513	Same.....Nut-lock	Sept. 25, 1877	790	234	12	536
187,713	Kelly, Thomas A., Jackson, Ala. Reversible scissors	Feb. 27, 1877	816	254	11	339
189,744	Kelley, William, assignor to F. J. Kelly, Sonora, Cal. Hay-press	Apr. 17, 1877	751	230	11	672
	Kelner, John. (*See* Johnson, William, assignor.)					
	Kelsall, William G. (*See* Jones, Ellis T., assignor.)					
187,019	Kelsey, George R., West Haven, Conn. Buckle	Feb. 6, 1877	101	34	11	216
189,745	Kelter, Michael, and P. Leickem, McHenry, Ill. Gate	Apr. 17, 1877	753	230	11	672
	Kelty, Gibbons L. (*See* Oothout, William, assignor.)					
	Kelty, Gibbons L., *et al.* (*See* Sanders, J. Milton, assignor.)					
	Kelty, Gibbons L. (*See* Tomlinson, Joseph B., assignor.)					
	Kemp, Clarence M. (*See* Kemp, William W. L., assignor.)					
190,220	Kemp, Joseph S., Magog, Canada. Manure-spreader	May 1, 1877	105	30, 31	11	760
7,916	Kemp, Thomas O., Beamsville, Canada, assignor to J. F. Hotchkiss, Bay City, Mich. Boiler-cleaner (Reissue)	Oct. 16, 1877	634	183	12	655
190,221	Kemp, William, jr., New York, N. Y. Sash-fastener	May 1, 1877	107	31	11	760
188,919	Kemp, William W. L., assignor of one-half interest to C. M. Kemp, Baltimore, Md. Gas-carbureter	Mar. 27, 1877	975	299	11	536
192,265	Kemper, Simon, Hermann, Mo. Steam-boiler attachment	June 19, 1877	779	237	11	1096
188,377	Kempf, Charles L., Brooklyn, N. Y. Photographic-plate holder	Mar. 13, 1877	422	131	11	443
186,850	Kempin, Edwin W., assignor to J. W. Branch, Saint Louis, Mo. Hot water heating apparatus	Jan. 30, 1877	1055	325	11	184
	Kempshall, Eleazer. (*See* Nash & Kempshall.)					
198,626	Kempton, George D., Philadelphia, Pa. Compensating journal	Dec. 25, 1877	951	290	12	1108
	Kendall, Charles H., *et al* (*See* Johnson, Daniel A., assignor) (Reissue.)					
	Kendall, George W., *et al.* (*See* Sherwood, Obadiah, jr., assignor.)					
189,746	Kendall, Thomas R., Palmyra, Mo. Fruit-drier	Apr. 17, 1877	754	231	11	672
190,145	Kendall, William, Saint Louis, Mo. Stove-flue thimble-tile	May 1, 1877	34	10	11	751
186,578	Kendrick, Andrew W. and C. T., Brooklyn, N. Y. Grain and seed separator	Jan. 23, 1877	778	210, 211	11	138
187,229	Kendrick, Andrew W., Brooklyn, N. Y. Spring bed-bottom	Feb. 13, 1877	310	101	11	257
	Kendrick, Charles T. (*See* Kendrick, Andrew W. and C. T.)					
	Kendrick, J. S., *et al.* (*See* Seys, Cornelius D., assignor.)					

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Kendrick, Tunis T. (*See* Ogborn & Kendrick.)					
189,747	Kennard, Jesse D., assignor to A. H. and T. C. Vickers, New Sharon, Iowa. Nut-lock	Apr. 17, 1877	755	231	11	672
187,230	Kennedy, Daniel, Brooklyn, N. Y. Straightway-valve	Feb. 13, 1877	313	101	11	257
187,231	Same.....same	Feb. 13, 1877	314	101	11	257
189,043	Kennedy, De Lancy, New York, N. Y. Projectile	Apr. 3, 1877	30	10	11	563
197,222	Kennedy, De Lancy, jr., New York, N. Y. Device for attaching checks to baggage	Nov. 20, 1877	527	155	12	852
	Kennedy, Donald. (*See* Shaw & Kennedy.)					
	Kennedy, Herman N. (*See* Coddington & Kennedy.)					
197,380	Kennedy, James, Minnesota City, Minn. Riding-plow	Nov. 20, 1877	684	205	12	876
190,146	Kennedy, Leonard W., Oakland, Cal. Key-fastener	May 1, 1877	35	10	11	751
	Kennedy, Thomas. (*See* Jennings, Charles S., assignor.)					
	Same.....(*See* Regan, William, assignor.)					
	Kennel, Frederick, *et al.* (*See* Ward, William C., assignor.)					
186,208	Kennish, William, New Brunswick, N. J., assignor to C. B. Dickenson, Brooklyn, N. Y. Atomizer	Jan. 16, 1877	400	122	11	77
194,917	Kenny, Terrence, Saint Paul, Minn. Grain-separator	Sept. 4, 1877	158	49	12	422
7,651	Kensett, James W., Troy, N. Y. Metallic lathing.....(Reissue)	May 1, 1877	300	88	11	785
193,660	Kent, Ambrose and B., Toronto, Canada. Indicator for spectacles	July 31, 1877	1170	350	12	205
196,121	Kent, Arthur C., Janesville, Wis. Corn-planter	Oct. 16, 1877	465	135	12	642
	Kent, Benjamin. (*See* Kent, Ambrose and B.)					
	Kent, Henry R. (*See* Kaiser, Andrew, assignor.)					
196,672	Kent, James, Gloversville, N. Y. Treating skins	Oct. 30, 1877	1038		12	742
196,673	Same.....Sample of leather	Oct. 30, 1877	1039	302	12	742
191,533	Kent, Robert, Brooklyn, N. Y. Hydraulic hat-pressing machine	June 5, 1877	26	8	11	980
197,864	Kent, Russell H., and J. A. Baldwin, assignors to Buckeye Sewer Pipe Company, Akron, Ohio. Manufacture of earthenware vessels	Dec. 4, 1877	155	47	12	968
196,362	Kenyon, George L., Lonsdale, R. I. Vehicle device for checking horses	Oct. 23, 1877	718	206	12	686
193,611	Kenyon, Martin R., Providence, R. I. Button-fastener	July 31, 1877	1111	333	12	198
197,732	Same.....Loom for weaving hair-cloth	Dec. 4, 1877	24	7, 8, 9	12	950
193,518	Kenyon, Silas R., Newark, N. Y. Clothes-pounder	July 24, 1877	1003	303	12	172
189,629	Kenyon, Thomas, Hamilton, Ohio. Adjustable elastic bucket for chain-pumps	Apr. 17, 1877	633	196	11	657
193,765	Kepler, William M., Cincinnati, Ohio, assignor to self and E. W. Bishop, Winchester, Ind. Ironing-board	July 31, 1877	1266	380	12	219
193,876	Keppler, Charles, New York, N. Y. Street-car bell	Aug. 7, 1877	71	23	12	244
196,810	Kerlicks, Georg E., Chapin, Ill. Door-securer	Nov. 6, 1877	74	22	12	771
188,018	Kern, Isaac R., Bloomington, Ill. Plow	Mar. 6, 1877	59	17	11	388
193,410	Kernochan, Francis E., Pittsfield, Mass. Water-closet	July 24, 1877	895	273	12	157
	Kernochan, John A. (*See* Lansdell, Henry S., assignor.)					
191,156	Kernochan, Robert, L., Titusville, Pa. Steam-radiator	May 22, 1877	1075	322	11	911
	Kerper, John. (*See* Sullenberger, William H., assignor.)					
	Kerr, Andrew. (*See* Williams & Kerr.)					
198,627	Kerr, Christopher C., Carthage, assignor to J. N. Haworth, Alba, Mo. Velocipede	Dec. 25, 1877	952	290	12	1108
189,044	Kerschner, Daniel, Connersville, Ind. Corn-drill	Apr. 3, 1877	31	11	11	563
187,763	Kersh, Thomas E., Palestine, Tex. Plow	Feb. 27, 1877	861	268	11	345
190,337	Kershaw, Charles S., Sherburne, New York. Hay-elevator	May 1, 1877	219	65	11	775
198,026	Kertson, Marcellus, Newark, N. J. Fire-escape	Dec. 11, 1877	323	100	12	1002
195,021	Kesseler, Frank, San Francisco, Cal. Stone-lathe	Sept. 11, 1877	276	84	12	446
191,349	Kester, Perry T., Philadelphia, Pa. Car-ventilator	May 29, 1877	1270	383	11	946
	Ketcham & Co., E. (*See* Lesson, Philip, assignor.)					
	Ketcham, Bunce R. (*See* Olmsted & Ketcham.)					
196,584	Ketcham, George W., Newark, N. J. Sieve	Oct. 30, 1877	955	277	12	730
	Ketcheson, John H. (*See* Lecompte & Ketcheson.)					
189,561	Ketchum, Frederick A., and H. Wilde, Cleveland, Ohio. Pocket hone, strop, and oil-cup combined	Apr. 17, 1877	568	176	11	649
187,535	Ketchum, William G., Augusta, Ill., assignor of two-thirds interest to D. W. Vowles, Washington, D. C. Propeller for steam-vessels	Feb. 20, 1877	625	194	11	305
186,040	Ketring, Philip M., Napoleon, Ohio. Hog-pen	Jan. 9, 1877	232	69	11	48
196,022	Kettell, James F., and A. H. Howland, Worcester, Mass. Pneumatic railway-signal	Oct. 9, 1877	343	93	12	618
198,514	Kettlewell, George, assignor to Parker & Stone Reaper Company, Beloit, Wis. Wrench	Dec. 25, 1877	869	265	12	1096
196,585	Keys, William, assignor to L. J. M. Hutchins, Montreal, Canada. Horseshoe-nail machine	Oct. 30, 1877	956	277	12	731
190,766	Keyser, John H., assignor to F. A. Palmer, New York, N. Y. Basin	May 15, 1877	691	204	11	851
190,767	Same.....Urinal or water-closet basin	May 15, 1877	692	204	11	852
190,768	Keyser, John H., and W. Turton, New York, N. Y. Wasteway-plug	May 15, 1877	693	204	11	852
190,338	Kibbey, Frank M., Mayfield, Ky., and J. C. Hall, Cincinnati, Ohio; said Hall assignor to said Kibbey. Folding bedstead	May 1, 1877	220	66	11	775
189,045	Kibler, Nathan, Pittsfield Ill. Grain-separator	Apr. 3, 1877	32	11	11	563
	Kibling, Augustus, *et al.* (*See* Fenton, Emery W., assignor.)					
194,603	Kidder, George R., assignor of two-thirds interest to L. Granger and C. W. Millett, Armada, Mich. Agricultural land-roller	Aug. 28, 1877	844	252	12	371
186,138	Kidder, Joshua R., Albion, Pa. Machine for shaving shingles	Jan. 9, 1877	322	98	11	60
190,498	Kidder, Moses W., Boston, assignor to self and P. Noyes, Lowell, Mass. Process and apparatus for generating and purifying gas	May 8, 1877	400	117, 118	11	806
191,766	Kidder, Moses W., assignor to self and P. Noyes, Boston, Mass. Process and apparatus for manufacturing illuminating-gas	June 12, 1877	247	78	11	1015
188,469	Kidder, Richard E., Worcester, Mass., assignor to I. R. Joslin, New York, N. Y. Copying-press	Mar. 20, 1877	526	162	11	406
188,148	Kiefer, Peter, Newport, Ky. Manufacture of fire-shovels	Mar. 6, 1877	181	55	11	400
188,470	Kiehle, Jonas, assignor of one-half interest to L. N. Bronson, Cedar Falls, Iowa. Washing-machine	Mar. 20, 1877	526	162	11	406
190,719	Kieley, Timothy, New York, N. Y. Steam-trap	May 15, 1877	650	192	11	846
195,933	Same.....same	Oct. 9, 1877	256	72	12	605
197,782	Same.....same	Dec. 4, 1877	79	24	12	957
	Kienardt, John. (*See* Prichard & Kienardt.)					
186,139	Kienle, Charles, New York, N. Y. Candle-lamp	Jan. 9, 1877	323	99	11	60
187,020	Kierns, Patrick C., New York, N. Y. Shovel	Feb. 6, 1877	101	34	11	216
190,769	Kiesele, August, New York, N. Y. Composition for casting ornamental figures	May 15, 1877	694		11	852
196,674	Kieser, Charles, Baltimore, Md. Meat-cutting device	Oct. 30, 1877	1040	302	12	742
188,802	Kilbourn, Washington H., Corry, Pa. Car-heater	Mar. 27, 1877	863	263	11	520
189,941	Kilbourne, William B., Auburn, Me. Hose-coupling	Apr. 24, 1877	966	295	11	709
	Kilgore, William C. (*See* Stout, Stephen, assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
193,661	Kilgroe, Virgil A., Anniston, Ala. Fence	July 31, 1877	1171	351	12	205
186,010	Killiches, Hermann. Lemberg, Austria. Dynamometer	Jan. 9, 1877	201	61	11	44
193,713	Killip, Robert E., Brooklyn, N. Y. Boiler or kettle for heating water upon oil-stoves	July 31, 1877	1215	364	12	211
	Kilmer, Augustus. (*See* Kilmer, Irving A., assignor.)					
	Same. (*See* Kilmer, Irving A. and E. E., assignors.)					
	Same. (*See* Kilmer, Elmer E. and I. A., assignors.)					
189,748	Kilmer, Elmer E. and I. A., assignors of one-half interest to A. Kilmer, Howe's Cave, N. Y. Bale-tie-twisting machine	Apr. 17, 1877	756	232	11	672
191,976	Kilmer, George D., Wilmington, Del. Lamp-extinguisher	June 12, 1877	457	141	11	1042
	Kilmer, Irving A. (*See* Kilmer, Elmer E. and I. A.)					
186,579	Kilmer, Irving A., assignor of one-half interest to A. Kilmer, Howe's Cave, N. Y. Bale-tie	Jan. 23, 1877	782	241	11	138, 139
192,437	Kilmer, Irving A., assignor of one-half interest to A. Kilmer, Cobbleskill, N. Y. Wire straightening and cutting machine	June 26, 1877	971	292	11	1133
192,921	Kilmer, Irving A. and E. E., assignors of one-third interest to A. Kilmer, Howe's Cave, N. Y. Feathering paddle-wheel	July 10, 1877	384	114	12	72
198,628	Kim, Georg, Pittsburg, Pa. Glass pot	Dec. 25, 1877	953	920	12	1108
	Kimball, Edwin N. (*See* Kimball, George T., assignor.)					
7,730	Kimball, Frederick J., assignor to Empire Transportation Company, Philadelphia, Pa. Metal car-frame (Reissue)	June 12, 1877	534	164	11	1051
187,536	Kimball, Frederick J., Philadelphia, Pa. Discharge-nozzle for grain-elevators	Feb. 20, 1877	626	194	11	305
192,266	Kimball, Frederick J., assignor to Empire Transportation Company, Philadelphia, Pa. Brake-beam and shoe	June 19, 1877	780	237	11	1096
192,767	Kimball, Frederick J., Philadelphia, Pa. Seal-lock	July 3, 1877	207	59, 60	12	41
192,768	Same same	July 3, 1877	209	60, 61	12	41
189,362	Kimball, George T., assignor to self and E. N. Kimball, Newton, Mass. Hub-runner	Apr. 10, 1877	359	115	11	613
191,241	Kimball, Hiram A., Philadelphia, Pa., assignor of one-third interest to A. E. Miller, Moorestown, N. J. Tool for shaping and dressing stone	May 29, 1877	1178	353	11	933
	Kimball, John. (*See* Harlow, Charles F., assignor.)					
7,708	Kimball, John, Boston, Mass. Machine for shaping boot and shoe heel stiffeners. (Reissue)	May 29, 1877	1448	435, 436	11	967
191,764	Same. Machine for shaping the soles of boots and shoes	June 12, 1877	245	77	11	1015
192,582	Same. Machine for making boot and shoe counters	July 3, 1877	28	9	12	16
198,302	Kimball, John J., Naperville, Ill. Windmill	Dec. 18, 1877	625	189	12	1051
193,965	Kimball, Joseph E. and E. Merritt, Abington, Mass. Nail-driving machine for attaching soles to boots and shoes	Aug. 7, 1877	164	50, 51	12	257
195,022	Kimball, Joseph E., assignor of one-half interest to E. Merritt, Abington, Mass. Nail-driving machinery	Sept. 11, 1877	277	84, 85	12	446
194,096	Kimback, Daniel A., Chicago, Ill. Whip-socket	Aug. 14, 1877	315	93	12	284
191,157	Kimber, Abraham, Muncie, Ind. Clothes-washer	May 22, 1877	1077	322	11	911
197,144	Kime, John, Victor, Iowa. Bench-hook	Nov. 13, 1877	431	127	12	830
	Kime, Marrion E. (*See* Kime, Warren W. S., assignor.)					
193,005	Kime, Warren W. S., Victor, assignor of one-half interest to M. E. Kime, Iowa County, Iowa Fence-wire stretcher	July 10, 1877	460	139	12	83
198,629	Kime, Warren W. S., Victor, Iowa. Corn-planter attachment	Dec. 25, 1877	953	291	12	1108
194,247	Kimmel, John, and J. Schmidgruber, Boston, Mass. Treating tobacco-leaves	Aug. 14, 1877	477		12	305
186,679	Kimpel, Louis, and E. Ferchland, Brooklyn, N. Y. Street-car brake	Jan. 30, 1877	881	273	11	161
195,377	Kimplen, Cornelius, assignor of one-half interest to W. R. Gould, Chicago, Ill. Machine for compressing tan-bark, &c	Sept. 18, 1877	643	190, 191	12	507
192,173	Kindermann, William, Troutville, Pa. Post-driver	June 19, 1877	677	207	11	1182
196,122	Kindy, Levi H., Seville, Ohio. Machine for stuffing horse-collars	Oct. 16, 1877	466	136	12	642
194,554	King, Abraham B., Camden, Ohio, assignor to C. King. Spring whiffle-tree	Aug. 28, 1877	804	239	12	365
	King, Catharine. (*See* King, Abraham B., assignor.)					
195,136	King, Charles C., Newark, N. J. Trundle-toy	Sept. 11, 1877	393	118	12	463
189,749	King, Charles H., Stapleton, N. Y. Desk	Apr. 17, 1877	758	232	11	673
186,580	King, Courtlen, Pittsburg, Pa. Dental plugger	Jan. 23, 1877	783	241	11	139
186,680	Same same	Jan. 30, 1877	882	273	11	162
190,971	King, David M., Mantua Station, Ohio. Potato-digger	May 22, 1877	901	267	11	887
198,027	King, Francis, Baltimore, Md., assignor of one-half interest to J. L. Sinn, Washington, D. C. Steam-pipe coupling for railway-cars	Dec. 11, 1877	323	100	12	1002
196,154	King, George E., Des Moines, Iowa. Tubular bridge	Oct. 16, 1877	495	144	12	646
	King, Harvey J. (*See* Smith, Solomon P., assignor.)					
187,300	King, Henry, assignor to self and A. C. Milliken, Allegheny, Pa. Ventilating railway-car	Feb. 13, 1877	471	147	11	278
	King, Horatio C. (*See* Vander, Linden & King.)					
197,783	King, James M. and J. H., Swan Creek, Ill. End-gate for wagons	Dec. 4, 1877	80	25	12	957
193,966	King, James T., Greenville, Ohio Agricultural steamer	Aug. 7, 1877	166	51	12	257
192,515	King, Jeremiah J., New York, N. Y. Locking-latch	June 26, 1877	1052	316	11	1143
190,222	King, John O., Altamont, Kans. Spring fish-hook	May 1, 1877	107	31	11	760
	King, Jonathan H. (*See* King, James M. and H.)					
193,766	King, Luranus F., and H. M. Funk, Pelo, Ill. Corn-planter	July 31, 1877	1267	380	12	219
194,826	King, Marcus L., Belmont, Ill. Portable apparatus for obtaining water-power	Sept. 4, 1877	72	23	12	410
198,303	King, Nathan L., Catskill, N. Y. Shearing machine	Dec. 18, 1877	625	190	12	1052
193,257	King, Oswald I., New York, N. Y. Lantern	July 17, 1877	727	222	12	126
7,802	King, Phineas F., Saint Louis, Mo., assignor to Beard & Bro. Door and hinge for burglar-proof safes (Reissue)	July 17, 1877	798	244	12	126
191,680	King, Phineas F., assignor to G. N. and E. J. Beard, Saint Louis, Mo. Hinge and door for burglar-proof safes	June 5, 1877	161	49, 50	11	908
194,918	King, Rufus J., Dayton, Ohio. Cooking-stove	Sept. 4, 1877	159	50	12	422
	King, Sidney B. (*See* Cole & King.)					
186,937	King, Sidney B., Buffalo, New York. Bird-cage	Feb. 6, 1877	26	10	11	205
	King, Son & Co. (*See* King, William C., assignor.)					
188,378	King, Sylvester L., Brooklyn, N. Y., assignor of part interest to J. R. Gilbert, Jersey City Heights, and L. D. Gordan, Jersey City, N. J. Paper-bag machine	Mar. 13, 1877	423	131, 132	11	443
	King, Theodore E. (*See* Hammond & King.)					
187,715	King, Theodore E., assignor to S. Fitch, Rockville, Conn. Fluting-iron	Feb. 27, 1877	818	254	11	340
	King, Theophilus, jr., *et al.* (*See* Young, Henry, jr., assignor.)					
187,391	King, Theophilus, jr., Quincy, assignor to self and C. B. Byrant, Stoneham, Mass. Bridge-wall attachment for furnaces	Feb. 13, 1877	472	147	11	278
189,046	King, William A., Detroit, Mich. Magnetic protector for coffee and spice mills	Apr. 3, 1877	33	12	11	563
186,938	King, William C., Union Township, assignor to King, Son & Co., Pittsburg, Pa. Glass bottle	Feb. 6, 1877	26	11	11	205
187,714	King, William C., Union Township, Pa. Jelly-glass	Feb. 27, 1877	817	254	11	339

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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195,219	Kingham, Jacob B., Boston, Mass. Alarm-safe	Sept. 18, 1877	492	145	12	485
	Kingsbury, Andrew B. (*See* Dean & Kingsbury)					
	Kingsbury, Edward P., *et al.* (*See* Jones, George F., assignor.)					
	Kingsbury, Henry A., *et al.* (*See* Jones, George F., assignor.)					
	Kingsford, Thomas. (*See* Melkersman, Fredcrick, assignor.)					
191,242	Kingsland, Abraham W., Chicago, Ill. Horseshoe-nail	May 29, 1877	1179	353	11	934
189,473	Kingsley, Horace L., and W. P. Packard, Racine, Wis. Blackboard	Apr. 10, 1877	464	146	11	627
198,121	Kingwell, Vincent, San Francisco, Cal. Garden-valve	Dec. 11, 1877	419	130	12	1015
190,147	Kingwill, John F., Chicago, Ill. Drive-chain	May 1, 1877	35	10	11	751
187,642	Kinne, Erastus M., Cuba, and S. E. Tompkins, Sing Sing, N. Y. Clip for halters	Feb. 20, 1877	726	225	11	319
192,516	Kinne, Erastus M., Cuba, N. Y. Tug-buckle	June 26, 1877	1053	317	11	1143
194,248	Same....Trace-buckle	Aug. 14, 1877	477	144	12	305
	Kinnear, Elvin C. (*See* Colby, Alstin G., assignor.)					
189,630	Kinney, Francis S., New York, N. Y. Hydraulic press	Apr. 17, 1877	633	196	11	657
196,233	Same....same	Oct. 16, 1877	576	166	12	657
191,243	Kinney, Israel, London, Canada. Cartridge-shell	May 29, 1877	1179	354	11	934
192,699	Kinsey, Wharton J., Denver, Colo. Wagon-bed	July 3, 1877	150	42	12	33
	Kintz, Joseph. (*See* Clark & Kintz.)					
	Kintzing, Gravenstine, *et al.* (*See* Beck, Jacob P., assignor.)					
186,482	Kinyon, Charles W., and A. T. Brown, Scott, N. Y. Milk-cooler	Jan. 23, 1877	691	212	11	126
	Kiuzie, John. (*See* Hendrickson, Justus J., assignor.)					
189,232	Kip, Henry W., and E. Rieckel, Buffalo, N. Y. Die for making hammers	Apr. 3, 1877	197	67	11	585
188,740	Kipp, Abraham, jr., and H. Murphy, Sing Sing, N. Y. Gas-regulator	Mar. 27, 1877	790	242	11	511
	Kirby, Dick M. (*See* Kirby, William A. and D. M.)					
190,049	Kirby, John, jr., assignor to Post & Co., Cincinnati, Ohio. Student-lamp	Apr. 24, 1877	1088	331	11	724
190,050	Same....Lamp	Apr. 24, 1877	1089	331	11	724
191,597	Kirby, Nahum W., Indianapolis, Ind. Feed-water heater for locomotives	June 5, 1877	80	24	11	987
190,339	Kirby, Philips, Seneca Falls, N. Y. Fence	May 1, 1877	221	66	11	775
197,733	Kirby, William A. and D. M., Auburn, N. Y. Lawn-sprinkler	Dec. 4, 1877	27	9	12	950
7,652	Kirchof, Charles, Newark, N. J. Candle-holder	May 1, 1877	300	88	11	785
	Kirchmann, Heinrich C. (*See* Eggers & Kirchmann.)					
186,737	Kirchner, John A., Chicago, Ill. Cradle	Jan. 30, 1877	935	290	11	169
198,732	Kirk, Alva H., Minneapolis, Minn. Millstone-bail	Dec. 25, 1877	1056	321	12	1123
198,462	Kirk, Patrick F., Cincinnati, Ohio. Self-ventilating sky-light	Dec. 25, 1877	791	240	12	1085
187,716	Kirk, William, Albany, N. Y. Handle for shawl-straps	Feb. 27, 1877	819	254	11	340
197,145	Kirk, William A. L., Hamilton, Ohio. Green-corn stripper	Nov. 13, 1877	432	127	12	830
194,690	Kirkbride, Bartley, Morganville, Ohio. Toy pistol	Aug. 28, 1877	925	275	12	382
	Kirkham, Charles H. (*See* Crandal, Edward M., assignor.)					
191,598	Kirkham, Richard N. B., Kansas, Ill. Hay derrick and stacker	June 5, 1877	82	25	11	987
186,851	Kirks, John S., assignor of one-half interest to E. Birtwell, Chester, Pa. Roving-twister	Jan. 30, 1877	1056	326	11	184
189,942	Kirkwood, Alex. O., Yonkers, N. Y. Combined desk, wash-stand, and blacking-case	Apr. 24, 1877	967	296	11	709
191,862	Kirkwood, David, Boston, Mass. Breech-loading fire-arm	June 12, 1877	345	106	11	1027
	Kirkwood, James. (*See* Hilty, Cyrus Y., assignor.)					
194,827	Kirkwood, Joseph S., assignor to self and H. C. Myers, McKeesport, Pa. Lifting-jack	Sept. 4, 1877	72	24	12	410
196,811	Same....Combined track-lifter and spike-puller	Nov. 6, 1877	74	23	12	771
	Kish, William V. (*See* Cooke, Charles L., assignor.)					
	Same....same....(Reissue.)					
191,441	Kissam, George F., New York, N. Y., assignor of one-half interest to E. L. Bartlett, Baltimore, Md. Machine for corrugating sheet-metal	May 29, 1877	1356	410	11	957
7,833	Kissell, Emanuel M. and M. L., Springfield, Ohio. Wheel-cultivator....(Reissue)	Aug. 7, 1877	230	68	12	265
190,972	Same....same	May 22, 1877	903	267	11	887
	Kissell, Martin L. (*See* Kissell, Emanuel M. and M. L.)					
	Same....same....(Reissue.)					
	Kissling, John. (*See* Frank & Kissling.)					
193,519	Kistler, John, Celina, Ohio. Cylindrical brush	July 24, 1877	1004	303	12	172
196,910	Kistner, Calvin, assignor to W. G. and W. Barnes, Freeport, Ill. Hay elevator and carrier	Nov. 6, 1877	182	53	12	785
	Kistner, Harry U. (*See* Fisher & Kistner.)					
	Kistner, Henry U., *et al.* (*See* Fisher, William H., assignor.)					
187,717	Kitchell, Park, Whippany, N. J. Machine for applying powder for the destruction of insects	Feb. 27, 1877	819	255	11	340
7,793	Kitchen, Ebenezer D. and E. W., Bucks County, Pa. Butter-worker....(Reissue)	July 17, 1877	787	242	12	134
186,852	Kitchen, Ebenezer D. and E. W., Buckingham Township, Pa. Butter-worker	Jan. 30, 1877	1057	327	11	184
	Kitchen, Emanuel W. (*See* Kitchen, Ebenezer D. and E. W.)					
	Same....same....(Reissue.)					
195,023	Kitchen, George H., Rye, N. Y. Reflector for chandeliers	Sept. 11, 1877	279	85	12	446
186,349	Kitchen, John, Manayunk, Pa., assignor to self and U. C. Allen, Sandy Hill, N. Y. Furnace for evaporating alkaline solutions	Jan. 16, 1877	545	165	11	93
196,462	Kitchen, John, Philadelphia, Pa., and U. C. Allen, Sandy Hill, N. Y. Apparatus for evaporating and calcining alkaline solutions	Oct. 23, 1877	811	234	12	730
188,248	Kitchen, William W., Grimsby, Canada. Calendar	Mar. 13, 1877	293	92	11	425
196,234	Kitchin, James E., Hurffville, N. J. Combined spirit-level and square	Oct. 16, 1877	578	167	12	657
196,123	Kite, John H., Philadelphia, Pa. Range	Oct. 16, 1877	467	136	12	642
187,537	Kitson, Richard, Lowell, Mass. Clothing for machines for carding, picking, &c	Feb. 20, 1877	627	195	11	305 306
187,538	Same....Machine for opening and separating cotton, &c	Feb. 20, 1877	627	195	11	306
193,094	Same....Cotton opener and cleaner	July 17, 1877	567	171	12	105
194,353	Same....Beater for cotton-openers	Aug. 21, 1877	600	179	12	328
189,047	Kittleson, Ole O., Milan Township, Ill. Barbed fence-wire	Apr. 3, 1877	34	12	11	563
191,599	Kitzmiller, Josiah, Keedysville, Md. Thill-coupling	June 5, 1877	83	25	11	987
	Klaitz, Charles. (*See* Lewars & Klaitz.)					
194,441	Klein, Alois J., Cincinnati, Ohio. Venting barrel-bungs	Aug. 21, 1877	685	225	12	339
193,714	Klein, Christopher, Brooklyn, N. Y. Fermenting-vat	July 31, 1877	1215	364	12	211
188,150	Klein, Jacob, Baltimore, Md. Apparatus for treating beer on draft	Mar. 6, 1877	182	56	11	405
186,681	Klein, John C., Pittsburg, Pa. Die for making grubbing-hoes	Jan. 30, 1877	883	273	11	162
196,363	Klein, John C., Allegheny County, Pa. Machine for making pick-eyes	Oct. 23, 1877	718	207	12	686
190,720	Kleinert, Isaac B., New York, N. Y. Ear-slipper	May 15, 1877	650	193	11	846
193,449	Klemm, Charles, Riga, Russia. Indoor gymnastic instrument	July 24, 1877	933	283	12	164
188,149	Kline, Charles B., Dodgeville, Iowa. Laying drain-tile	Mar. 6, 1877	181	55	11	404
188,060	Kline, Joseph W., and P. Mason, Chicago, Ill. Grain-separator	Mar. 6, 1877	100	30	11	394
196,979	Kline, Robert H., Philadelphia, Pa. Medicated ring-pessary	Nov. 13, 1877	259	77	12	805
	Kline, Samuel, sr. (*See* Taliaferro & Kline.)					

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.	
194,155	Klinefelter, Levi L., Summit County, Ohio. Bag-holder	Aug. 14, 1877	395	117	12	293	
197,278	Kling, Alpheus H., Perrysburg, Ind. Hen house	Nov. 20, 1877	581	172	12	860	
193,662	Kling, William, Gallipolis, Ohio. Molder's facing-powder	July 31, 1877	1172		12	205	
189,311	Klinglesmith, John F., assignor of one-half interest to C. Farner, Saint Louis, Mo Bovel	Apr. 10, 1877	311	98	11	607	
189,750	Same.....Wagon-brake lever	Apr. 17, 1877	758	233	11	673	
194,521	Same.....Wagon-jack	Aug. 28, 1877	775	230	12	361	
198,122	Klingmueller, Friedrich, Prague, Bohemia, Austria. Gas meter	Dec. 11, 1877	420	130	12	1015	
188,741	Kloman, Andrew, Pittsburg, Pa. Metal-rolling	Mar. 27, 1877	791	243	11	511	
193,450	Knaggs, William, Richview, Canada. Rotary churn	July 24, 1877	934	284	12	163	
196,585	Knapp, Abram B., Elizabeth, N. J., assignor to Ellis, Knapp & Co., New York, N. Y. Umbrella-runner	Oct. 30, 1877	957	277	12	731	
	Knapp, Adrian J. (*See* Green & Knapp.)						
187,867	Knapp, A. Haydn, Newton, Mass. Spring-balance for window-curtain fixtures	Feb. 27, 1877	967	300	11	359	
187,868	Same.....Curtain-fixtures	Feb. 27, 1877	968	300	11	359	
195,763	Knapp, A. Haydn, Newton, assignor of two-thirds interest to G. N. March, Watertown, and C. H. Cushman, Cambridge, Mass. Curtain-tassel clamp	Oct. 2, 1877	70	21	12	571	
194,442	Knapp, Fayette W., and C. Schallhorn, Fiddletown, Cal. Buckle and snap-hook	Aug. 21, 1877	687	205	12	339	
193,520	Knapp, Friedrich, Brunswick, Germany. Tanning	July 24, 1877	1005		12	172	
193,521	Same.....Chemical compound for tanning hides and skins	July 24, 1877	1006		12	172	
187,285	Knapp, George N., Arbuckle, W. Va. Churn	Feb. 13, 1877	367	117	11	264	
196,095	Knapp, George S., assignor of part interest to I. H. Kellogg and G. A. Arnold, Chicago, Ill Door-spring	Oct. 16, 1877	433	126	12	638	
196,235	Knapp, George S., Chicago, Ill. Lightning-rod	Oct. 16, 1877	579	167	12	658	
197,865	Knapp, George W., Baltimore, Md. Sheet-metal cup or can	Dec. 4, 1877	156	48	12	968	
186,257	Knapp, Henry F., New York, N. Y. Railway-brake apparatus	Jan. 16, 1877	441	136	11	82	
189,233	Same.....Relieving stranded vessels	Apr. 3, 1877	198	67	11	585	
195,896	Same.....Deepening bars of rivers	Oct. 9, 1877	215	61	12	599	
	Knapp, Ira S. (*See* Knapp, Philo A. and I. S.)						
196,364	Knapp, James W., assignor of one-half interest to J. H. Holly, Warwick, N. Y. Handle for bundles	Oct. 23, 1877	723	208	12	687	
187,539	Knapp, Philo A. and I. S., Danbury, Conn. Rotary engine	Feb. 20, 1877	629	195	11	306	
194,604	Knapp, Riley I., Guilford, Ill. Double-acting pump	Aug. 28, 1877	845	252	12	371	
	Knappenberger, Daniel. (*See* Thompson & Knappenberger.)						
191,686	Knause, John W., Jersey City, N. J. Spring clasp and hook	June 5, 1877	166	51	11	998	
191,534	Knecht, Charles L., Pittsburg, Pa. Manufacture of glassware	June 5, 1877	28	8	11	980	
192,769	Same.....Covered glassware	July 3, 1877	210	61	12	41	
197,477	Kneeland, Joseph C., assignor to M. H. Spaulding, trustee, Northampton, Mass. Machine for piling paper	Nov. 27, 1877	797	238	12	901	
190,223	Kneeland, Sylvanus R., Boston, Mass. Relief-valve for air-brakes	May 1, 1877	108	31	11	760	
194,249	Knettle, Robert H., Lone Elm, and C. Force, Bunceton, Mo. Hedge-trimmer	Aug. 14, 1877	478	144	12	305	
	Knickerbocker, Charles R. (*See* Fuller, Clark S., assignor)	(Reissue.)					
	Knickerbocker, Charles R., *et al.* (*See* Pond, Chester H., assignor.)						
191,356	Knickerbocker, Charles R., Jackson, Mich. Manufacture of flour	Aug. 21, 1877	600	180	12	328	
193,967	Knight, Albert, Sandusky, Ohio. Tool	Aug. 7, 1877	168	52	12	257	
195,220	Knight, Ellis, Evanston, Wyo., assignor to W. Sellers, Philadelphia, Pa. Lifting work into and out of lathes	Sept. 18, 1877	493	146	12	485	
186,733	Knight, Henry, Liverpool, England. Making a pigment base	Jan. 30, 1877	936		11	169	
186,853	Knight, Henry H., Sandusky, Ohio. Stirrup	Jan. 30, 1877	1058	327	11	184	
189,363	Same.....same	Apr. 10, 1877	360	116	11	613	
198,630	Same.....same	Dec. 25, 1877	954	291	12	1109	
196,300	Knight, Horatio D., and W. M. Whiteside, Lancaster, Pa. Composition for molds for dental plates	Oct. 23, 1877	658		12	678	
	Knight, Judson. (*See* Cuming & Knight.)						
	Knight, Philip. (*See* Robertson & Knight.)						
	Knight, Samuel. (*See* Hemp & Knight.)						
189,864	Knight, William H., Quebec, Canada. Apparatus for butting and dressing timber	Apr. 24, 1877	889	272	11	699	
	Knighton, William, *et al.* (*See* Gibson, Sidney, assignor.)						
191,158	Knipper, Andrew, Cleveland, Ohio. Machine for sawing staves	May 22, 1877	1078	323	11	911	
	Knispel, Christian. (*See* Locher & Knispel.)						
189,234	Knoch, Charles, and S. L. Salomon, New York, N. Y. Labeling-machine	Apr. 3, 1877	199	68	11	585	
	Knopf, Charles H., *et al.* (*See* Hoffacker, John, assignor.)						
	Knoff, Louis, *et al.* (*See* Hoffacker, John, assignor.)						
	Knopf, Michael, *et al.* (*See* Hoffacker, John, assignor.)						
191,977	Knorr, Jacob F., Orange, N. J. Pad for harness-saddles	June 12, 1877	458	141	11	1042	
	Knott, William. (*See* Nealon, Higgins & Knott.)						
	Knowles, Elijah H. (*See* Briggs & Knowles.)						
	Knowles, George A. (*See* Hayden & Knowles.)						
185,828	Knowles, Isaac W., East Liverpool, Ohio. Sagger-pin machine	Jan. 2, 1877	15	5	11	11	
187,643	Knowles, J. Henry, J. K. Proctor, and F. P. Pendleton, assignors to said Proctor and Pendleton and T. Cunningham, L. and G. Brown, and H. B. Lincoln, Philadelphia, Pa. Wool-washing machine	Feb. 20, 1877	727	225, 226	11	319	
7,784	Knowles, Lucius J., Worcester, Mass. Loom	(Reissue.)	July 3, 1877	273	79, 80	12	49
7,785	Same.....same	(Reissue.)	July 3, 1877	276	80, 81	12	49
186,350	Same.....same	Jan. 16, 1877	546	165, 166	11	95	
191,600	Same.....Harness-cording for power-looms	June 5, 1877	84	25	11	988	
197,641	Same.....Belt-shipping mechanism for looms	Nov. 27, 1877	968	288	12	926	
198,202	Same.....same	Dec. 18, 1877	519	160	12	1036	
198,203	Same.....same	Dec. 18, 1877	520		12	1036	
196,023	Knowles, William H., jr., Camden, N. J. Burglar-alarm	Oct. 9, 1877	346	98	12	618	
186,682	Knowlton, Charles H., Rockland, Me. Car-coupling	Jan. 30, 1877	884	274	11	162	
189,751	Knowlton, David, Camden, Me. Variable power-windlass beam	Apr. 17, 1877	759	233	11	673	
189,235	Knowlton, George A., assignor to self and W. D. Parlin, Natick, Mass. Grinding-machine	Apr. 3, 1877	200	68	11	586	
190,872	Knowlton, Henry C., Gardner, Mass. Chair-back seat	May 15, 1877	783	232	11	864	
191,443	Knowlton, Warren H., Dubuque, Iowa. Fire-escape	Aug. 21, 1877	687	205	12	339	
	Knowlton, William A. (*See* Heaton, Henry L., assignor)	(Reissue.)					
	Knowlton, William A. (*See* Spaulding, George H., assignor.)						
195,024	Knox, Annabella G., New York, N. Y. Fire-escape	Sept. 11, 1877	280	85	12	416	
	Knox, David, *et al.* (*See* Griffin, Caleb H., assignor.)						
	Knox, John D. (*See* Gray & Knox.)						
191,657	Knox, Richard F., San Francisco, Cal. Quicksilver condenser	June 5, 1877	167	52	11	999	

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
191,601	Knox, Robert A., Ghent, assignor to self and Darnall Brothers, Louisville, Ky. Tobacco-plant planter	June 5, 1877	84	25	11	984
198,928	Knox, Samuel A., Worcester, Mass. Plow	Dec. 11, 1877	324	100	12	1002
196,587	Koch, Frederick W., Saint Clair, Pa. Neck-tie retainer	Oct. 30, 1877	958	278	12	731
	Koch, John E. C. (*See* Crickmer, Richard J., assignor.)					
	Koch, Louis. (*See* Bull & Koch.)					
197,866	Kocher, Fred., Syracuse, N. Y. Platform-spring	Dec. 4, 1877	157	48	12	968
198,545	Kochler, Joseph, New York, N. Y. Pocket-protector	Dec. 25, 1877	870	265	12	1096
	Kochs, Theodore A. (*See* Peters, Franz, assignor.)					
197,146	Kochsmeir, Henry P., assignor of one-half interest to W. P. Emmert, Freeport, Ill. Extensible step-ladder	Nov. 13, 1877	432	128	12	831
197,522	Koegler, Adolph, and C. H. Nicoll, Newark, N. J. Hose-nozzle	July 24, 1877	1006	303	12	172
	Koehler, Joseph M. (*See* Carples & Koehler.)					
	Koehur, Charles. (*See* Skelton, Thomas, assignor.)					
190,148	Koenig, Dominique Boston, Mass. Embossing-press	May 1, 1877	36	11	11	751
192,583	Koerber, Alex. R., and J. Sheridan, Toronto, Canada. Reed-organ	July 3, 1877	29	9	12	16
198,395	Köhler, Ernst, and F. B. Turck, Milwaukee, Wis.; said Turck assignor to said Köhler. Station-indicator	Dec. 18, 1877	712	216	12	1064
	Kohler, John M. (*See* Silberzahn & Hayssur, assignors.)					
	Kohn, Frank J. (*See* Pattillo, Samuel V., assignor.)					
187,644	Kohrssen, John A., Allegheny, Pa. Composition for preserving animal and vegetable matter	Feb. 20, 1877	732		11	319
196,911	Köhsel, Conrad. Hanover, Prussia. Machine-belting	Nov. 6, 1877	184	53	12	785
195,826	Kokesch, Joseph, Paris, France. Treatment of seal-skins	Oct. 2, 1877	133		12	580
189,107	Kolb, Adam, and C. Osberghaus, Sandusky, Ohio. Sash-balance	Apr. 3, 1877	84	30	11	570
192,438	Same same	June 26, 1877	975	293	11	1134
	Kollenberg, Carl. (*See* Ernst, Franz, assignor.)					
	Kolling, Henry. (*See* Kolling, John and H.)					
191,442	Kolling, John and H., Arlington Heights, Ill. Horse-power	May 29, 1877	1358	411	11	957
194,919	Same Thrashing-machine	Sept. 4, 1877	159	50	12	422
191,978	Komp, Albert, New York, N. Y. Embroidery pattern	June 12, 1877	459	142	11	1042
	Konipleat, Fred. (*See* Christrup & Schneider, assignors.)					
	Konold, Christian. (*See* Jordon & Konold.)					
196,024	Konz, Sebastian, assignor of one-half interest to P. W. Carle, Louisville, Ky. Furniture-caster	Oct. 9, 1877	347	98	12	618
193,164	Koon, Charles B., Auburn, N. Y. Clothes-drier	July 17, 1877	627	190	12	113
194,444	Same Same	Aug. 21, 1877	688	205	12	340
	Koplin, Harry B., *et al.* (*See* Koplin, William, assignor.)					
189,236	Koplin, William, assignor to H. B. Koplin, Newcastle, Pa., and A. Welsh, Youngstown, Ohio. Nail-plate feeder	Apr. 3, 1877	201	68, 69	11	586
	Kopp, Leonard, *et al.* (*See* Thoman, Zacharias, assignor.)					
194,250	Krackewizer, Stephen, Hoboken, N. J., and P. Schulze, Brooklyn, N. Y. Building-block	Aug. 14, 1877	479	144	12	305
190,874	Kraetzer, Gottlieb, Chicago, Ill. Bee-hive	May 15, 1877	785	{232 233}	11	864
187,869	Kraft, George M., Evansville, Ind. Steam-boiler	Feb. 27, 1877	970	301	11	359
197,147	Kramer, Camillo, Cohoes, N. Y. Table	Nov. 13, 1877	433	128	12	831
190,873	Kramer, Conrad and W., Upsbur, Ohio. Steam feed-cooking apparatus	May 15, 1877	784	232	11	864
193,819	Kramer, John, and B. Boke, Maria Stein, Ohio. Side-gear for thrashing-machines	Aug. 7, 1877	23	8	12	237
193,820	Same Horse-power	Aug. 7, 1877	24	8	12	237
	Kramer, Louis. (*See* Kurten & Kramer.)					
	Kramer, William. (*See* Kramer, Conrad and W.)					
194,444	Kranich, Hellmuth, and J. Bach, New York, N. Y. Piano-forte	May 29, 1877	1360	411	11	957
196,912	Same Piano-action frame	Nov. 6, 1877	185	54	12	785
188,250	Kratt, John A., Buffalo, N. Y. Match-box	Mar. 13, 1877	295	92	11	426
195,614	Kratz, George, Evansville, Ind. Feed-water heater for steam-boilers	Sept. 25, 1877	881	262	12	549
192,377	Kraus, Herman T. C., assignor to J. Matheson and J. Jackson, New York, N. Y. Smoke-house	June 26, 1877	918	276	11	1126
186,581	Krausch, Theodore, New York, N. Y. Preserving ice in ice-houses	Jan. 23, 1877	784	242	11	139
	Krause, Julius, *et al.* (*See* Theegarten, Gottfried Z., assignor.)					
191,535	Krause, Otto H., assignor to F. O. Matthiessen & Wiechers Sugar Refining Company, Jersey City, N. J. Apparatus for liquoring hard sugar in centrifugal machines	June 5, 1877	29	8	11	980
194,357	Krause, William H. H., Chicago, Ill. Device for holding bird-feed in cages	Aug. 21, 1877	602	180	12	328
186,398	Krauser, John L., Tylersburg, Pa. Sock and stocking	Jan. 16, 1877	600	184	11	101
192,700	Krauss, Charles, Chicago, Ill. Fan attachment for rocking-chairs, &c	July 3, 1877	151	42	12	33
190,770	Kreamer, Henry H., Reading, Pa. Composition for removing incrustations	May 15, 1877	694		11	852
188,920	Krelwitz, Edmund F., assignor of one-third interest to E. G. St. Clair, Ishpeming, Mich. Tag	Mar. 27, 1877	976	299	11	536
185,935	Kretsinger, William H., Fort Madison, Iowa. Cradle snath-band	Jan. 2, 1877	128	38	11	24
193,523	Krick, Adam C., Newark, N. J. Traveling-bag, satchel, &c	July 24, 1877	1007	303	12	172
195,615	Krick, Irwin S., Conneautville, Pa. Hay elevator and conveyer	Sept. 25, 1877	882	262	12	549
195,616	Same Vehicle-spring coupling	Sept. 25, 1877	883	262	12	549
197,867	Same Cultivator	Dec. 4, 1877	158	48	12	969
198,516	Krickl, Moritz, New York, N. Y. Suspensory drawers	Dec. 25, 1877	845	257	12	1092
188,151	Kritch, William C., and A. Greenwood, Leeds, England. Printing-press	Mar. 6, 1877	183	56, 57	11	405
	Krodel, John J. (*See* Ford, Charles S., assignor.)					
193,663	Krocber, Florence, Hoboken, N. J. Calendar-clock dial	July 31, 1877	1173	351	12	205
197,478	Kroener, William, Boston, Mass. Manufacture of caps	Nov. 27, 1877	798	238	12	901
	Krogh, Carl O. (*See* Krogh, Casper and C. O.)					
194,445	Krogh, Casper and C. O., Krogbville, Wis. Turbine water-wheel	Aug. 21, 1877	689	206	12	340
188,152	Krogh, Ferdinand W., Tulare, Cal. Sawing-machine	Mar. 6, 1877	185	57	11	405
190,224	Kromer, William, San Francisco, Cal. Bung and bung-iceserter	May 1, 1877	109	32	11	760
195,451	Kronenberg, Edward, assignor to H. Baldwin, Philadelphia, Pa. Counterfeit-coin detecter	Sept. 25, 1877	730	216	12	527
197,223	Krost, Eugene, New Orleans, La. Apparatus for making ice	Nov. 20, 1877	528	156	12	852
	Krueger, Henry. (*See* Eveleth & Krueger.)					
	Kruidenier, A. (*See* De Vries, Jello A., assignor.)					
191,159	Krum, Edward M., Chatham, N. Y. Pitman-box	May 22, 1877	1079	323	11	9 1
195,934	Krupp, Frank, New Orleans, La. Burglar-alarm	Oct. 9, 1877	258	72	12	605
	Krymer, William. (*See* Hammond & Krymer.)					
191,863	Kryter, Charles A., Wheeling, W. Va. Ice-creeper	June 12, 1877	346	107	11	1027
190,875	Kuchinka, Joseph, Cleveland, Ohio. Vegetable-slicer	May 15, 1877	787	233	11	864
192,267	Kuder, James S., Tiffin, Ohio. Carriage-curtain fastener	June 19, 1877	781	237	11	1026
190,876	Kuehnhold, Ferdinand B., Newark, N. J. Bridle-bit	May 15, 1877	788	233	11	865

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
188,251	Kugler, Kasper, Oil City, Pa. Temper-screw for artesian-wells	Mar. 13, 1877	295	93	11	426
188,803	Kuhlman, Friederich, Cincinnati, Ohio. Barrel-gage	Mar. 27, 1877	865	263	11	521
191,061	Kuhlman, Henry, Boston, Mass. Hat	May 22, 1877	989	294	11	899
187,540	Kuhn, George R., Brooklyn, N. Y. Water-closet	Feb. 20, 1877	630	196	11	306
188,379	Kuhn, William H., and S. Miller, Albany, Oreg. Combined harrow and clod-crusher	Mar. 13, 1877	425	132	11	443
	Kuhns, Benjamin. (*See* Kuhns, Edward, assignor.)					
7,709	Kuhns, Benjamin, Dayton, Ohio. Grain-drill (Reissue)	May 29, 1877	1449	436	11	967
191,443	Kuhns, Benjamin, C. Scholz, and D. Y. Kuhns, Dayton, Ohio; said Scholz and D. Y. Kuhns assignors to said B. Kuhns. Seed-drill and fertilizer	May 29, 1877	1359	411	11	957
	Kuhns, Daniel Y. (*See* Kuhns, Scholz & Kuhns.)					
186,090	Kuhns, Edward, Logansport, Ind., assignor of one-half interest to B. Kuhns, Dayton, Ohio. Grain-drill	Jan. 9, 1877	276	83	11	54
	Kuhns, Herman L. (*See* Ferguson, William, assignor.)					
	Kulp, Henry G. (*See* Keiser, Florenz, assignor.)					
198,396	Kulp, Isaac R., Hatfield, Pa. Hay-press	Dec. 18, 1877	713	216	12	1065
188,380	Kundegraber, Charles, assignor of two-thirds interest to F. Settles, Wyandotte, and L. Weinberg, Leavenworth, Kans. Vehicle-wheel hub	Mar. 13, 1877	425	132	11	444
194,251	Kunkel, John A., Jersey City, N. J. Refrigerator	Aug. 14, 1877	479	144	12	305
196,675	Same same	Oct. 30, 1877	1041	302	12	742
190,340	Kunkle, Adam, assignor of one-half interest to W. L. Tripp, Bellaire, Ohio. Beer-cooler	May 1, 1877	222	66	11	775
193,411	Kunkle, Erastus B. Fort Wayne, Ind. Safety-valve	July 24, 1877	896	273	12	158
	Kunzler, Peter. (*See* Harcum, Andrew, assignor.)					
189,562	Kupferle, John C., and P. White, Saint Louis, Mo. Water-closet	Apr. 17, 1877	568	176, 177	11	649
196,025	Kurtzmann, John O., New York, N. Y. Printing-press	Oct. 9, 1877	348	99	12	618
196,236	Kurten, Joseph, and L. Kramer, Saint Louis, Mo. Governor for steam-engines	Oct. 16, 1877	580	167	12	658
188,641	Kurth, Hermann, Milwaukee, Wis. Grain-separator	Mar. 20, 1877	680	210, 211	11	488
	Kurtz, Ephraim. (*See* Kurtz, Henry and E.)					
192,268	Kurtz, Henry and E., Richmond, Pa. Thrashing-machine	June 19, 1877	781	238	11	1096
191,864	Kurtz, John G., Milton, Pa. Inking apparatus	June 12, 1877	347	107	11	1027
197,148	Kustel, Guido, and O. Hofmann, San Francisco, Cal. Amalgamating-pan	Nov. 13, 1877	434	128	12	831
190,597	Kutscher, Julius, New Haven, assignor of one-half interest to L. Kutscher, Bridgeport, Conn. Pocket-lamp	May 8, 1877	496	148	11	819
195,514	Kutscher, Julius, New Haven, Conn. Commode	Sept. 25, 1877	791	234	12	536
	Kutscher, Louis. (*See* Kutscher, Julius, assignor.)					
	Kyle, David. (*See* Murff & Kyle.)					
192,922	Kynett, Henry P., Lisbon, Iowa. Cultivator	July 10, 1877	335	114	12	73
	Labaro, Henry N. (*See* Lowth, Howe & Labare.)					
187,645	Labarthe, Bernard, Sabres, A. Guillemare, Mont de Maison, and L. Pallas, Sabres, France. Lamp-burner	Feb. 20, 1877	732	236	11	319
197,381	La Bau, John H., Brooklyn, N. Y. Attaching knobs and roses to doors	Nov. 20, 1877	684	205	12	876
195,137	La Baw, George W., Jersey City, N. J. Trap for waste-pipes	Sept. 11, 1877	394	119	12	463
193,371	Laburthe, Clement, Paris, France. Pumping apparatus for raising wine, beer, &c	July 24, 1877	861	263	12	152
197,279	Lackey, Sylvenus J, Cleveland, Ohio. Chart for object-teaching	Nov. 20, 1877	582	172, 173	12	860
192,770	Lacomme, Jean M. A., L. I. C. Marville, and A. A. Giren, Paris, France. Advertising seat and chair	July 3, 1877	211	62	12	41
	Lacy, J. F., *et al.* (*See* Howard, William H., assignor.)					
191,865	Ladd, Alexander P., Saint Lawrence, N. Y. Washing-machine	June 12, 1877	348	107	11	1027
193,664	Same Thill-coupling	July 31, 1877	1173	351	12	205
	Ladd, Charles W. (*See* Schuyler, Isaac C., assignor.)					
193,968	Ladd, Henry R., and Z. C. Parker, Orwell, Ohio. Fetter to prevent cows and horses from kicking	Aug. 7, 1877	168	52	12	257
191,244	Ladd, Hermon W., Chelsea, Mass. Spring bed-bottom	May 29, 1877	1180	354	11	934
	Ladd, Moses. (*See* Hinman & Ladd.)					
192,439	Ladd, Story B., Washington, D. C. Pen-holder	June 26, 1877	975	293	11	1134
	Ladd, William W. (*See* Hinman & Ladd.)					
187,392	La Dow, Charles, Albany, N. Y. Harrow-cultivator	Feb. 13, 1877	473	148	11	278
193,454	Ladow, Jacob S, Mechanicsville, N. Y. Water-wheel	July 24, 1877	937	285	12	164
191,602	Lafayette, George G., and P. W. Strong, Brockville, Canada. Reversible eccentric	June 5, 1877	85	26	11	988
7,676	Lafferty, Robert M., Toledo, Ohio, assignor to Smith & Lafferty. Pump-valve. (Reissue)	May 15, 1877	862	255	11	874
7,677	Same Pump (Reissue)	May 15, 1877	862	255	11	874
7,678	Same same (Reissue)	May 15, 1877	868	256	11	874
194,691	Lafitte, John B., New Orleans, La. Preparing bay for animal food	Aug. 28, 1877	926		12	382
	La Flour, Andrew J. (*See* Broseker, William, assignor.)					
	La Fleur, Andrew J., *et al.* (*See* Broseker, William, assignor.)					
	Laflin, George L., *et al.* (*See* Smith, Charles S., assignor.)					
189,312	Laflin, Matthew, Chicago, Ill. Composition for lining barrels, &c	Apr. 10, 1877	313		11	607
189,313	Laflin, Matthew, and S. Elliott, Chicago, Ill.; said Elliott assignor to said Laflin. Process and apparatus for amalgamating ores	Apr. 10, 1877	313	99	11	607
	Lafourcade, William R., *et al.* (*See* Fowler, William R., assignor.)					
	Same same (Reissue.)					
195,617	Lafourcade, William R., Beverly, N. J. Evaporator for hot-air register	Sept. 25, 1877	884	263	12	549
193,006	La Franco, Peter A., assignor of one-half interest to A. H. Baldwin, Elmira, N. Y. Street sign	July 10, 1877	461	139	12	83
	Lagowitz, Jacob. (*See* Frankel, Alexander, assignor.)					
193,612	Laidley, Theodore T. S., Watertown, Mass. Metallic cartridge	July 31, 1877	1111	334	12	198
	Laig, Rudolph. (*See* Bruns, Laig & Von Dehsen.)					
196,156	Laird, Hilamon S., assignor of part interest to L. Landeker, San Luis Obispo, Cal. Baling-press	Oct. 16, 1877	497	145	12	647
197,642	Laird, William A., assignor of one-half interest to G. L Faust and W. L. Warren, Ossian, Iowa. Horse-detacher	Nov. 27, 1877	969	288	12	926
198,397	Lake, Abraham E., Miami County, Ind. Corn-sheller	Dec. 18, 1877	714	217	12	1065
190,342	Lake, Ezra B., Bricksburg, N. J. Fire-escape	May 1, 1877	224	67	11	775
196,676	Same Combined pencil holder and sharpener	Oct. 30, 1877	1042	302	12	742
198,103	Lake, J. Christopher, Camden, N. J. Curtain-fixture	Dec. 11, 1877	421	131	12	1016
186,582	Lake, Jesse S, Smith's Landing, N. J. Traction-engine	Jan. 23, 1877	785	242	11	139
195,935	Lakin, Josephus H., Montgomery, Ala. Car-brake	Oct. 9, 1877	259	72	12	605
	Lalanco & Grosjean Manufacturing Company. (*See* Milligan, Henry C., assignor.)					
	Same (*See* Milligan & Booth, assignors.)					
	Same (*See* Gerard, Joseph, assignor.)					

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187,870	Lally, Martin, Eau Claire, Wis. Operating saw-mill carriages	Feb. 27, 1877	971	301	11	359
7,972	LaHement, Pierre, assignor to H. M. Richardson and G. McKee, Boston, Mass. Velocipede (Reissue)	Nov. 27, 1877	1062	318	12	938
197,149	Lamason, Benjamin P., Milton, Pa. Hasp for freight-cars	Nov. 13, 1877	436	128	12	831
186,011	Lamb, Chancy, Clinton, Iowa. Nigger-engine	Jan. 9, 1877	203	61	11	44
194,605	Lamb, Christopher, San Francisco, Cal. Framing-square	Aug. 28, 1877	846	252	12	371
196,677	Lamb, Daniel, New York, N. Y. Production of water-proof gums	Oct. 30, 1877	1012		12	742
193,007	Lamb, George W., Westonburg, Ky. Apparatus for carbureting air	July 10, 1877	461	139	12	84
189,752	Lamb, James C., assignor to self, W. Rackliff, B. Douglas, jr., and L. B. Deming, Middletown, Conn. Lubricator	Apr. 17, 1877	759	233	11	673
195,290	Lamb, James R., Saint James, Minn. Car-coupling	Sept. 18, 1877	565	165	12	495
	Lamb, John. (*See* Carroll & Lamb.)					
196,157	Lamb, John, Ottawa, Canada. Resawing-machine	Oct. 16, 1877	497	145	12	647
187,393	Lamb, Joseph and R., New York, N. Y. Book-support	Feb. 13, 1877	474	148	11	278
185,829	Lamb, Patrick W., Albany, N. Y. Steam-boiler furnace	Jan. 2, 1877	16	5	11	11
198,124	Lamb, Restore B., Camden, N. J. Refrigerating transportation-case	Dec. 11, 1877	422	131	12	1016
	Lamb, Richard. (*See* Lamb, Joseph and R.)					
195,827	Lamb, William, O'Fallon, Ill. Clasp for supporting garments	Oct. 2, 1877	133	38	12	580
	Lambert, George A. (*See* McNeill & Lambert.)					
	Lambert, H. E. (*See* Wharton, William A., assignor.)					
189,753	Lambert, James T., assignor to Detroit Iron and Brass Manufacturing Company, Detroit, Mich. Waffle-iron	Apr. 17, 1877	760	233	11	673
196,096	Lambert, Joseph T., Dayton, Ohio. Flower bracket and stand	Oct. 16, 1877	434	126	12	638
	Lambert, Louis H., *et al.* (*See* Keim, Charles J., assignor.)					
	Lambeth, Samuel W., *et al.* (*See* Fowler, William R., assignor.)					
	Same same (Reissue.)					
190,341	Lambkin, Charles H., Mount Vernon, N. Y. Lock-case	May 1, 1877	223	66	11	775
	Lamboley, Francois F. X. (*See* Berlie & Lamboley.)					
	Lambrecht, Ferdinand. (*See* Schaeffer, Charles, assignor.)					
188,519	Lamoree, James P., Middlesex, N. Y. Card-rack	Mar. 20, 1877	571	176	11	472
7,768	La Mothe, Bernard, J., New York, N. Y. Metallic car frame and platform (Reissue)	June 26, 1877	1099	332, 333	11	1150
198,631	Same. Metallic-car	Dec. 25, 1877	955	291	12	1109
	Lamphere, Edwin O. (*See* Guthrie, Wardell, assignor.)					
	Lampson, Edward R. (*See* Lewis & Lampson.)					
194,156	Lancaster, Edwin R., Alum Mills, Va. Horse-power	Aug. 14, 1877	396	117	12	293
193,258	Lancaster, Elias H., and T. Shull, Monpelier, Ind. Corn-planter	July 17, 1877	728	222	12	127
7,491	Lancaster, Israel, Richmond, Ind., assignor to S. D. Locke. Grain-binder (Reissue)	Feb. 6, 1877	279	91, 92	11	240
188,471	Lancaster Joseph J., London, Canada. Grinding and triturating apparatus	Mar. 20, 1877	527	162	11	466
186,483	Land, Charles H., Detroit, Mich. Composition of matter for veneers	Jan. 23, 1877	692		11	126
	Landeker, Lazare. (*See* Laird, Hilamon, S., assignor.)					
190,225	Landeker, Lazare, San Luis Obispo, Cal. Window-sash	May 1, 1877	110	32	11	761
191,866	Same. Tool-handle	June 12, 1877	348	107	11	1027
194,358	Same. Securing handles in tools	Aug. 21, 1877	603	180	12	328
188,644	Landenberger, Charles H., assignor to M. A. Landenberger, Philadelphia, Pa. Knitting-machine	Mar. 20, 1877	686	212	11	488
188,804	Landenberger, Martin, Philadelphia, Pa. Fringe	Mar. 27, 1877	866	264	11	521
188,921	Landenberger, Martin, jr., Philadelphia, Pa. Stocking	Mar. 27, 1877	977	299	11	536
	Landenberger, Mary A. (*See* Landenberger, Charles H., assignor.)					
198,029	Lander, Richard R., Turlock, Cal. Windmill	Dec. 11, 1877	325	101	12	1002
	Landers, Frary & Clark. (*See* Turnbull, Andrew, assignor.)					
	Landers, John F. (*See* Morgan & Landers.)					
185,936	Landfear, Edward P., Jersey City, N. J. Nut-lock	Jan. 2, 1877	129	38	11	25
195,291	Landfear, William R., Brooklyn, N. Y., assignor to T. Merrick, Holyoke, Mass. Lathe for turning bobbins	Sept. 18, 1877	566	165	12	495
196,463	Landfear, William R., Hartford, Conn. Car-starter	Oct. 23, 1877	812	234	12	700
186,399	Landis, Israel L., Philadelphia, Pa. Brush-handle	Jan. 16, 1877	601	184	11	101
189,631	Landreth, Wilkinson M., Johnson City, Tenn. Churn-dasher	Apr. 17, 1877	634	196	11	657, 658
	Lane & Bodley Company. (*See* Myers & Smith, assignors.)					
196,678	Lane, Henry M., Norwood, Ohio. Automatic regulator for ventilating and other passages	Oct. 30, 1877	1045	303	12	742
	Lane, Ira G. (*See* Barry & Lane.)					
196,679	Lane, Joel, Philadelphia, Pa. Combined ladder and step	Oct. 30, 1877	1046	303	12	743
198,632	Lane, John D., Brooklyn, N. Y. Lamp	Dec. 25, 1877	956	291	12	1109
	Lane, John G. (*See* Lane, William J., assignor.)					
189,474	Lane, Jonathan D., Onondaga, Mich. Whiffletree attachment	Apr. 10, 1877	465	146	11	627
	Lane, Louis S. (*See* Roberts, Rowe & Lane.)					
195,025	Lane, William, San Francisco, Cal. Car-coupling	Sept. 11, 1877	280	85	12	446
186,683	Lane, William J., assignor of one-half interest to J. G. Lane, Millbrook, N. Y. Hydraulic motor for driving light machinery	Jan. 30, 1877	885	274	11	162
193,665	Laney, William S., Lithopolis, Ohio. Force-pump	July 31, 1877	1174	351, 352	12	205
195,897	Same. same	Oct. 9, 1877	216	61	12	600
187,719	Lang, William H., Vergennes, Vt. Pump for town and city supply	Feb. 27, 1877	820	255, 256	11	340
	Lange, Henry, jr. (*See* Fischer, Philip, assignor) (Reissue.)					
187,871	Langerfeld, Arthur, New York, N. Y. Instrument for draughtsmen	Feb. 27, 1877	971	301	11	359
198,125	Same. Stop-work for swing gas-brackets	Dec. 11, 1877	423	132	12	1016
198,304	Langerfeld, Ewald, New York, N. Y. Stop for swing gas-brackets	Dec. 18, 1877	626	190	12	1052
197,868	Langford, Charles F., Brooklyn, N. Y. Stocking-protector	Dec. 4, 1877	159	48	12	969
194,445	Langham, William, Cedar Rapids, Iowa. Fence-post	May 29, 1877	1362	411	11	958
194,252	Lannay, Edward, Lima, Ohio. Pump-valve	Aug. 14, 1877	480	145	12	305
189,364	Lansburg, Max, Baltimore, Md. Liquid-filter	Apr. 10, 1877	360	116	11	613
	Lansdell, Henry, *et al.* (*See* Lansdell, Henry S., assignor.)					
189,754	Lansdell, Henry S., Brooklyn, N. Y., assignor to J. A. Kernochan, Pittsfield, Mass. Machine for threading metal screws	Apr. 17, 1877	761	234	11	673
192,517	Lansdell, Henry S., assignor to H. Lansdell and J. S. Leng, Brooklyn, N. Y. Damper for elevators	June 26, 1877	1054	317	11	1143
193,451	Lanstrom, Reinhold, Mount Lookout, Ohio. Sad-iron holder	July 24, 1877	935	284	12	163
	Lanter, Frank A., *et al.* (*See* Parker, Henry, assignor.)					
	Lanyon, John, *et al.* (*See* Lanyon, Robert, assignor.)					
	Lanyon, Josiah, *et al.* (*See* Lanyon, Robert, assignor.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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197,643	Lanyon, Robert, La Salle, Ill., assignor to J. and J. Lanyon. Ore-crusher	Nov. 27, 1877	909	288, 289	12	926
188,472	Lapham, Joseph H., Cleveland, Ohio. Wash-board	Mar. 20, 1877	528	163	11	466
193,095	Same.....same	July 17, 1877	568	171	12	105
192,584	Lapham, Rufus, New York, N. Y., assignor to W. Platt, Elizabeth, N. J. Stop-cock for elastic and flexible tubing	July 3, 1877	30	9	12	16
189,237	Lapham, Valentine, Marion, Ohio. Meat-tenderer	Apr. 3, 1877	204	69	11	586
	Lapham, William P. (*See* Hutchinson, Warren N., assignor.)					
193,969	Laprade, Pierre A., Issoudun, France. Combined espalier and shelter for vines	Aug. 7, 1877	169	52	12	257
196,980	Lapworth, William, Chelsea, Mass. Elastic fabric for suspenders, &c	Nov. 13, 1877	260	77	12	805
188,153	Larkin, Albert, assignor of one-half interest to H. S. Hall, Almond, N. Y. Fruit-bag	Mar. 6, 1877	186	57	11	405
196,680	Same.....Step-ladder	Oct. 30, 1877	1047	303	12	743
192,923	Larmanjat, Jean, Paris, France. Traction-wheel for locomotives	July 10, 1877	385	114, 115	12	73
193,412	Larrabee, Benjamin F., Lynn, assignor to R. Harrington, trustee, Salem, Mass. Machinery for unhairing, scouring, &c., hides and skins	July 24, 1877	897	274	12	158
188,520	Larsen, Christen, and R. Olsen, Racine, Wis. Straw-cutter	Mar. 20, 1877	572	176, 177	11	472
189,109	Larsh, John M., Crawfordsville, Ind. Ax-helve shield	Apr. 3, 1877	86	31	11	571
	Larson, Frank. (*See* Canedy & Larson.)					
187,286	Larson, Ole H., Fort Dodge, Iowa. Ventilating-faucet	Feb. 13, 1877	368	118	11	264
197,556	Same.....Beer-faucet	Nov. 27, 1877	882	262	12	913
195,026	La Rue, Chambers C., Blairstown, Iowa. Wire-fence tightener	Sept. 11, 1877	281	86	12	446
190,051	La Rue, Silas H., assignor of one-half interest to A. Brink, Frenchtown, N. J. Curtain-tassel	Apr. 24, 1877	1090	332	11	724
	Lasar, Godfrey H. (*See* Boeringer, George, assignor.)					
190,686	Lasar, Godfrey H., Saint Louis, Mo. Tailor's measure	May 15, 1877	611	182	11	841
194,253	Lasater, James M., assignor to R. L. Lasater, Manchester, Tenn. Combined fish-trap and bucket	Aug. 14, 1877	481	145	12	305
	Lasater, Robert L. (*See* Lasater, James M., assignor.)					
186,258	Lascell, Christina, Newark, N. J. Abdominal corset	Jan. 16, 1877	442	136	11	83
190,343	Lash, John S., Philadelphia, Pa. Hinge	May 1, 1877	224	67	11	776
194,446	Same.....Brush and broom support	Aug. 21, 1877	690	206	12	340
196,365	Lasher, Zachariah G., Clermont, N. Y. Churn-motor	Oct. 23, 1877	723	208	12	687
187,650	Latchworth, George J., Buffalo, N. Y. Eye for hames	Feb. 20, 1877	737	228	11	320
193,715	Latham, Eugene E., and R. Binns, South Windham, Conn. Machine for grinding calender-rolls	July 31, 1877	1216	365	12	212
186,583	Lathrop, Edward S., and L. Salvaterre, Savannah, Ga.; said Salvaterre assignor to said Lathrop. Mosquito-net frame	Jan. 23, 1877	786	242	11	139
192,701	Lathrop, Edward S., Savannah, Ga. Folding toilet-screen	July 3, 1877	151	42	12	33
	Lathrop, James. (*See* Allen & Lathrop.)					
190,052	Lathrop, James, and F. H. Allen, assignors to J. Lathrop and J. E. Warner, Norwich, Conn. Hub-attaching device	Apr. 24, 1877	1091	332	11	724
195,138	Lathrop, John D., assignor of two-thirds interest to A. P. Sutphen, Somerville, and S. S. Bogart, jr., Jersey City, N. J. Milk-pail	Sept. 11, 1877	395	119	12	463
	Lathrop, Martin A. (*See* Sell, James T., assignor.)					
189,113	La Tourette, Henry, Shellsburg, Iowa. Car-pusher	Apr. 3, 1877	90	32	11	571
189,632	Latta, Emmit G., Friendship, N. Y. Harness-buckle	Apr. 17, 1877	635	197	11	658
196,530	Latta, Emmit G., Friendship, assignor of one-fourth interest to Pratt & Letchworth, Buffalo, N. Y. Hame-eye	Oct. 30, 1877	904	261	12	723
	Lattin, Robert T. (*See* Lewis & Lattin.)					
192,518	Laub, George H., West Lebanon, Ind. Sleigh	June 26, 1877	1055	317	11	1143
187,718	Laubach, Henry C., H. Barghausen, and H. T. Ries, Washington, D. C. Car-brake	Feb. 27, 1877	859	255	11	340
190,499	Lauback, Isaac S., Chicago, Ill. Dust-pan	May 8, 1877	495	118	11	807
	Lauby, Charles. (*See* Lauby, Joseph M., assignor.)					
193,970	Lauby, Joseph M., assignor of one-half interest to C. Lauby, Brodhead, Wis. Stove-pipe elbow	Aug. 7, 1877	171	52	12	258
191,603	Lauckhardt, John D. W., Brooklyn, N. Y. Metallic fence-cap	June 5, 1877	86	26	11	988
	Lauer, Anton. (*See* Hartmann, Julius, assignor.)					
190,500	Lauer, Anton, and J. Hartmann, Louisville, Ky. Plow	May 8, 1877	496	118	11	807
7,803	Same.....same.....(Reissue)	July 17, 1877	800	245	12	136
188,381	Lauffer, Josiah B., Harrison City, Pa. Washing-machine	Mar. 13, 1877	426	133	11	444
	Laufkotter, William H. (*See* Hopper & Laufkotter.)					
196,681	Lauger, Albert R. J., Mount Olivet, Ky. Coffee-roaster	Oct. 30, 1877	1047	304	12	743
189,108	Laughlin, Joseph M., Boston, Mass. Machine for making horseshoe-nails	Apr. 3, 1877	84	30, 31	11	570
189,111	Same..... Machine for beveling horseshoe-nail plates	Apr. 3, 1877	88	31	11	571
189,112	Same..... Machine for making horseshoe-nails	Apr. 3, 1877	89	32	11	571
193,971	Laurence, Henry, Chicago, Ill. Writing-tablet	Aug. 7, 1877	172	53	12	258
194,447	Laurence, Henry, New Orleans, La. Tooth-pick	Aug. 21, 1877	691	206	12	340
190,598	Laurie, David H., Montreal, Canada. Boot-cleaner	May 8, 1877	496	148	11	819
198,030	Lauten, Frank H., New York, N. Y. Stuffing-box for propeller-shafts	Dec. 11, 1877	326	101	12	1002
195,139	Lautenschlager, A. Charles, Chicago, Ill. Can for packing meat	Sept. 11, 1877	397	119	12	464
197,479	Lauth, Jacob, Chicago, Ill. Toy buzz	Nov. 27, 1877	799	238	12	902
189,110	Lauth, John F., Pittsburg, Pa. Oil lamp or chandelier	Apr. 3, 1877	86	31	11	571
188,742	Lauth, John N., Pittsburg, Pa. Cotton-bale tie	Mar. 27, 1877	793	243	11	511
	Lauz, George. (*See* Walsh, James F., assignor).....(Reissue.)					
	Lavars, John H., *et al.* (*See* McCarty, David, assigner.)					
193,372	Lavenson, Isidor, San Francisco, Cal. Branding-stamp for marking candles	July 24, 1877	861	264	12	153
	Lavin, Bernard. (*See* Gooder & Lavin.)					
189,314	Lawler, Edward, Hartford, Conn. Hot-water apparatus	Apr. 10, 1877	315	99	11	607
193,877	Lawler, James J., assignor of one-half interest to J. W. Brock, Scranton, Pa. Steam-radiator	Aug. 7, 1877	72	23	12	245
194,692	Lawler, James J., Scranton, Pa. Water-filter	Aug. 28, 1877	926	275	12	382
	Lawrence, Abram B., *et al.* (*See* Hurd, Ira N., assignor.)					
192,073	Lawrence, Alvin, Lowell, Mass., assignor to self and J. K. Foster, Philadelphia, Pa. Furnace-grate	June 19, 1877	581	176	11	1070
186,939	Lawrence, Elijah C., Chicago, Ill. Hanging-lamp	Feb. 6, 1877	27	11	11	205
190,877	Same.....Lamp-burner	May 15, 1877	788	233	11	865
191,867	Lawrence, Ephraim M., Bryant's Pond, Me. Sled-break	June 12, 1877	349	108	11	1027
193,666	Lawrence, James R., Durham, assignor of one-half interest to S. R. Carrington, Orange County, N. C. Tobacco-packing machine	July 31, 1877	1175	352	12	206
	Lawrence, John H., *et al.* (*See* Upham, Andrew J., assignor.)					
188,521	Lawrence, John H., Sterling, Ill. Barn-door hanger	Mar. 20, 1877	573	177	11	472
	Lawrence Spool Company. (*See* Wait, Oscar E., assignor.)					

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
193,878	Lawrence, Theodore C., Ladoga, Ind. Wagon-brake	Aug. 7, 1877	73	24	12	245
192,833	Lawrence, William E., and C. E. L. Holmes, New York, N. Y. Brush	July 10, 1877	305	89	12	62
188,019	Lawrence, William S., Kalamazoo, Mich. Plow	Mar. 6, 1877	60	18	11	388
194,446	Samo same	May 29, 1877	1362	412	11	953
196,026	Samo same	Oct. 9, 1877	350	100	12	618
191,979	Laws, Albert D., Bridgeport, Conn. Machine for turning, drilling, and tapping sucker-rod connections	June 12, 1877	460	142	11	1042
186,584	Lawson, Benjamin S., New York, N. Y. Steam-pump valve-gear	Jan. 23, 1877	787	242	11	139
190,226	Lawson, Henry S., Baltimore, Md. Traveler for jib-sheets	May 1, 1877	111	32	11	761
186,484	Lawson, John P., Chandler's Valley, Pa. Sled-tongue	Jan. 23, 1877	692	212	11	126
196,682	Lawson, Peter B., assignor to P. Parrott, Cold Spring, N. Y. Vent-stopper for ordnance	Oct. 30, 1877	1048	304	12	743
189,475	Lawton, Hiram T., Middletown Spring, Vt. Platform-scales	Apr. 10, 1877	465	146	11	627
	Lawton, Walter E., *et al.* (*See* Strong, Myron H., assignor.)					
198,126	Lay, John L., Buffalo, N. Y. Electro-magnetic steering apparatus for submarine torpedo-boats	Dec. 11, 1877	424	132	12	1016
198,127	Same.....Electro-magnetic steering apparatus for submarine boats	Dec. 11, 1877	425	132, 133	12	1016
187,541	Lay, Joseph, Olmstead Falls, Ohio. Broom	Feb. 20, 1877	631	196	11	306
188,062	Lazarevitch, Constantin, Brooklyn, N. Y. Bag-fastener	Mar. 6, 1877	102	30	11	394
7,578	Lea, Charles G., Alton, Ill. Car-ventilation (Reissue)	Mar. 27, 1877	1077	332	11	549
	Leach, Almon, *et al.* (*See* Park, George H., assignor.)					
195,027	Leach, Daniel R., assignor of one-half interest to T. P. Lewis and A. B. Crary, Pike, N. Y. Washing-machine	Sept. 11, 1877	282	86	12	447
	Leach, George J., *et al.* (*See* Park, George H., assignor.)					
190,053	Leach, Henry B., Boston, Mass. Faucet	Apr. 24, 1877	1091	332	11	725
198,463	Leach, William H., and A. S. Allen, Uxbridge, Mass. Cloth-finishing machine	Dec. 25, 1877	792	240, 241	12	1085
186,585	Leak, Elias, Trenton, N. J. Thimble-pin for supporting pottery ware in kilns	Jan. 23, 1877	788	242	11	139
198,128	Leas, Harvey N., Kokomo, Ind. Ventilating millstone	Dec. 11, 1877	428	133	12	1017
190,227	Lease, Gurdin D., Jeffersonville, Vt. Car-coupling	May 1, 1877	112	32	11	761
185,937	Leason, Alban S., Hingham, Wis. Pump-handle	Jan. 2, 1877	129	38	11	25
	Leathers, Thomas P., *et al.* (*See* Jones, Thomas L., assignor.)					
187,874	Leavitt, Albert, and H. L. Drew, assignors, by mesne assignments, to American Staple Sewing-Machine Company. Sewing-machine	Feb. 27, 1877	972	302	11	360
193,879	Leavitt, Edwin M., Auburn, Me. Flying target	Aug. 7, 1877	73	24	12	245
192,519	Leavitt, Thomas, Everett, Mass. Postmarking and canceling machine	June 26, 1877	1056	317, 318	11	1143
188,154	Leavitt, William D., and B. J. Thurston, assignor of one-third interest to J. W. Hadlock, Cincinnati, Ohio. Gas and water regulator	Mar. 6, 1877	187	58	11	405
	Lebœuf, Evelien. (*See* Poincot, Etienne, assignor.)					
190,054	Le Bosquet, Charles and J., Haverhill, Mass. Steam-heating apparatus	Apr. 24, 1877	1092	332	11	725
	Le Bosquet, Joseph. (*See* Le Bosquet, Charles and J.)					
195,936	Lebus, Andrew, Flora, Ill. Car-mover	Oct. 9, 1877	260	73	12	605
186,854	Lechner, Francis M., Waynesburg, Ohio. Mining-machine	Jan. 30, 1877	1059	327, 328	11	184, 185
197,734	Same same	Dec. 4, 1877	28	9, 10	12	950
194,303	Lecompte, Samuel D., and J. H. Ketcheson, Leavenworth, Kans. Fastening for hold-back straps of harness	Aug. 21, 1877	545	164	12	321
	Le Comte & Perkins Manufacturing Company, limited. (*See* Perkins, George H., assignor.)					
	Le Comte & Perkins Manufacturing Company *et al.* (*See* Perkins, George H. and J. H., assignors.)					
	Le Comte, Joseph, *et al.* (*See* Perkins, George H., assignor.)					
	Same.....(*See* Perkins, George H. and J. H., assignors.)					
198,633	Le Count, Charles W., Norwalk, Conn. Expanding mandrel	Dec. 25, 1877	957	292	12	1109
192,771	Lecourt, François, and A. Guillemare, Paris, France. Coloring fruits and vegetables.	July 3, 1877	212		12	41
189,755	Leclère, Francis, Detroit, assignor to N. L. Bancroft, I. Goulden, and N. S. Boynton, Port Huron, Mich. Harness-connection for vehicles	Apr. 17, 1877	765	234	11	677
198,031	Leday, Alfred D., San Francisco, Cal. Light-weight rope	Dec. 11, 1877	327	101	12	1002
	Ledford, Benjamin A. (*See* Rouze, Ledford & O'Brien.)					
189,756	Ledford, Milton M., Asheville, N. C. Tobacco-stick	Apr. 17, 1877	765	235	11	674
194,448	Le Duc, William G., Hastings, Minn., assignor to A. V. Gardner, New York, N. Y. Elastic draft-link	Aug. 21, 1877	692	206	12	340
186,426	Ledwith, James, Madison, Wis. Side-spring wagon	Jan. 16, 1877	637	194	11	119
190,771	Lee, Alfred, Forest Grove, Oreg. Machine for punching and shearing metal	May 15, 1877	694	205	11	852
188,646	Lee, Archibald K., Philadelphia, Pa. Reducing asphaltum to a liquid	Mar. 20, 1877	690		11	489
188,645	Same.....Concrete pavement	Mar. 20, 1877	688	212	11	489
	Lee, Francis B. (*See* Carroll & Lee.)					
7,970	Lee, James, New York, N. Y., assignor to Hale & Kilburn Manufacturing Company, Philadelphia, Pa. Convertible chair (Reissue)	Nov. 27, 1877	1060	318	12	938
193,524	Lee, James, Ilion, New York. Primer for cartridge	July 24, 1877	1008	304	12	173
193,821	Lee, James, Milwaukee, Wis. Breech-loading fire-arm	Aug. 7, 1877	25	8	12	237
	Lee, John A. (*See* Bridges, Empson C. L., assignor.)					
198,517	Lee, Louis M., Fairland, Ind. Post-hole and well-auger	Dec. 25, 1877	846		12	1092
187,470	Lee, Steven F., New Scotland, N. Y. Cultivator	Feb. 20, 1877	568	176	11	297
	Lee, Washington. (*See* Van Pelt & Lee.)					
194,828	Leek, George W., Terre Haute, Ind. Car-mover	Sept. 4, 1877	73	24	12	411
193,413	Leeming, John, Poughkeepsie, N. Y. Hair-crimper	July 24, 1877	900	274	12	158
189,114	Leeper, James A., Concord, Mo. Kitchen-ventilator	Apr. 3, 1877	90	33	11	571
189,238	Lees, Jonathan A., Philadelphia, Pa. Weed-destroyer	Apr. 3, 1877	204	69	11	586
198,129	Same.....Weed-cutter	Dec. 11, 1877	428	134	12	1017
	Leet, C. D., *et al.* (*See* Taylor & McCamish, assignors.)					
188,155	Leet, Charles D., and H. A. Chapin, Springfield, Mass. Sheet-metal	Mar. 6, 1877	188		11	405
195,515	Lefeldt, Wilhelm C. L., and C. G. O. Leutsch, Schoeningen, Germany. Centrifugal machine for creaming milk	Sept. 25, 1877	792	234	12	536
190,599	Leftwich, Richard M., and J. W. Crossley, Lithonia, Ga. Saw-gummer	May 8, 1877	497	148	11	819
191,350	Leggo, William A., Montreal, and F. C. Ireland, Lachute, Canada; said Leggo assignor to said Ireland. Roller-skate	May 29, 1877	1270	383, 384	11	946
197,735	Le Grand, Charles D., Wilkesbarre, Pa. Buckboard wagon	Dec. 4, 1877	30	10	12	950
196,913	Le Grande, William W., Louisville, Ky. Watchman's time-detector	Nov. 6, 1877	186	54	12	786
	Lehman, John. (*See* Guilleman & Lehman.)					
197,869	Lehman, Isaac, New York, N. Y. Manufacture of glass buttons	Dec. 4, 1877	160	49	12	969

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
192,074	Lehnert, Amalie A., Philadelphia, Pa. Pan for roasting and baking meats	June 19, 1877	582	176	11	1070
	Leickem, Peter. (*See* Kelter & Leickem.)					
186,485	Leigh, Lewis, Pittsfield, Mass. Preparing aniline dyce	Jan. 23, 1877	693	212	11	126
188,382	Leigh, Samuel E., Cherokee, Kans. Washing-machine	Mar. 13, 1877	427	133	11	444
	Leighton, H. H. (*See* Doer, Joseph P., jr., assignor.)					
191,980	Leighton, James M., Rochester, N. Y., assignor to self, J. T. Salter, G. W. Dyer, and T. S. Sprague. Making illuminating-gas	June 12, 1877	462		11	1042
	Leipziger, Moritz. (*See* Brown, Julius, assignor.)					
	Leismann, Louis. (*See* Mueller, Charles, assignor.)					
197,382	Leisure, Thaddeus, Boonville, N. Y. Head-rest	Nov. 20, 1877	686	205	12	877
189,315	Leitch, John, Black Earth, Wis. Corn-planter	Apr. 10, 1877	316	99, 100	11	608
186,351	Leland, Edwin A., New York, assignor to L. Richardson, Brooklyn, N. Y. Multifold pipe-coupling	Jan. 16, 1877	547	166	11	95
186,352	Same.....Trunk for water-closets	Jan. 16, 1877	548	166	11	95
186,855	Leland, Edwin A., assignor to L. Richardson, Brooklyn, N. Y. Attaching hose to hose-coupling	Jan. 30, 1877	1060	328	11	185
186,856	Same.....Sheet-metal can	Jan. 30, 1877	1060	328	11	185
187,288	Leland, Edwin A., New York, assigner to L. Richardson, Brooklyn, N. Y. Ratchet-wrench	Feb. 13, 1877	369	118	11	265
187,287	Same.....Wrench	Feb. 13, 1877	368	118	11	264, 265
187,394	Leland, Edwin A., Brooklyn, N. Y. Pipe-coupling	Feb. 13, 1877	475	148	11	278
187,395	Leland, Edwin A., assignor to L. Richardson, Brooklyn, N. Y. Hose-coupling	Feb. 13, 1877	476	148	11	278
198,305	Leland, Edwin A., New York, assignor to L. Richardson, Brooklyn, N. Y. Sheet-metal can	Dec. 18, 1877	626	190	12	1052
198,306	Same.....same	Dec. 18, 1877	627	190	12	1052
	Le Lubez, Pierre A. V. (*See* Pottier, Charles, assignor.)					
197,736	Lemcke, Otto, Schkenditz, Prussia. Piano-forte	Dec. 4, 1877	31	10	12	950
194,498	Lemley, Calip, Dutch Creek, Iowa. Sled-brake	Aug. 21, 1877	742	221	12	347
	Lemley, Joseph T., *et al.* (*See* Miller, Samuel H., assignor.)					
	Lemley, Robert D., *et al.* (*See* Miller, Samuel H., assignor.)					
189,757	Lemman, John, Cincinnati, Ohio. Chair-seat	Apr. 17, 1877	766	235	11	674
188,156	Lemmle, George, Cleveland, Ohio. Chimney-top	Mar. 6, 1877	189	58	11	405
143,822	Lemon, John M., Latrobe, Pa. Force-pump	Aug. 7, 1877	28	9	12	238
195,292	Lempert, William S., Fort Davis, Tex. Faucet	Sept. 18, 1877	568	165	12	495
	Lenfestey, William H. F., *et al.* (*See* Rubicam, John H., assignor.)					
	Leng, John S., *et al.* (*See* Lausdell, Henry S., assignor.)					
194,829	Lengfield, G. Willis, Chazy, N. Y. Folding wash-bench	Sept. 4, 1877	74	24	12	411
188,157	Lenhart, Adam I., assignor of one-half interest to W. H. Rust, New Brunswick, N. J. Carriage-button	Mar. 6, 1877	189	58	11	405
191,160	Lennig, Charles, Philadelphia, Pa. Manufacturing aluminic sulphate and alums	May 22, 1877	1079		11	911
196,464	Same.....Manufacture of eal ammoniac and sulphate of soda or potash	Oct. 23, 1877	814		12	700
	Lenox, George. (*See* Barber & Lenox.)					
	Lentsch, Carl G. O. (*See* Leufeldt & Lentsch.)					
	Lenz, Frank, *et al.* (*See* Van Wicklen, Daniel, assignor.)					
192,585	Leon, Bauferd F., Joliet, Ill. Boot and shoe sole trimming machine	July 3, 1877	30	10	12	16
7,492	Leonard, Franklin, assignor to Cleveland City Forge and Iron Company, Cleveland, Ohio. Chain-machine (Reissue)	Feb. 6, 1877	92, 93	92, 93	11	249
193,337	Leonard, Granville H., East Hampton, Mass. Clasp of fabric-holder	July 24, 1877	827	253	12	148
196,588	Same.....Clasp for suspender-ends	Oct. 30, 1877	959	278	12	731
	Leonard, Hiram L. (*See* Philbrook, Francis J., assignor.)					
197,519	Leonard, John N., assignor to Leonard Silk Company, Warehouse Point, Conn. Stop-motion for thread-stretchers	Nov. 27, 1877	841	251	12	907
	Leonard, Patrick. (*See* Estampes, Abel D., assignor.)					
	Leonard, Peter F. (*See* Jowett & Leonard.)					
187,646	Leonard, Reuben, Oakland Mills, Penn. Horse-power	Feb. 20, 1877	733	227	11	319
	Leonard Silk Company. (*See* Leonard, John N., assignor.)					
187,872	Leprohon, Pantalion M., Brooklyn, N. Y. Egg-holder	Feb. 27, 1877	972	301	11	350
196,756	Lerch, Thomas W., Canton, Ohio. Draft attachment for plows, cultivators, &c.	Nov. 6, 1877	21	6	12	763
	Lerché, Albrecht J. (*See* Huber, Lindauer & Lerché.)					
190,501	Le Roux, Remy, New York, N. Y. Ornamenting textile fabrics	May 8, 1877	406	118	11	807
186,586	Le Row, Jacob H., Chicago, assignor of one-half interest to G. W. Brown, Oak Park, Ill. Clothes-line reel	Jan. 23, 1877	789	243	11	139
7,482	Le Roy, Tunnis V., Utica, N. Y., assignor of one-half interest to A. Day. Manufacture of axle-boxes (Reissue)	Jan. 30, 1877	1125	347	11	193
187,149	Lersch, Charles, New York, N. Y. Cigar-bunching machine	Feb. 6, 1877	218	71	11	232
188,383	Leslie, Eliza S., Saxonville, Mass. Vegetable-masher	Mar. 13, 1877	427	133	11	444
192,702	Lesser, Simon H., New York, N. Y. Ventilating-bung	July 3, 1877	152	43	12	33
196,683	Lesson, Philip, Newark, N. J., assignor to E. Ketcham & Co., New York, N. Y. Spoon-handle	Oct. 30, 1877	1049	304	12	743
198,398	Lester, Charles, New Orleans, La. Instrument for opening bale-ties	Dec. 18, 1877	714	217	12	1065
195,898	Lester, George H., Brooklyn, N. Y. Milk-can	Oct. 9, 1877	217	61	12	600
190,878	Lester, James S., Atlanta, Ga. Hoe	May 15, 1877	789	234	11	865
194,969	Letchworth, George J., Buffalo, N. Y. Hame-staple	Sept. 11, 1877	222	69	12	439
190,228	Letton, Raphael E., Quincy, Ill. Reed-organ action	May 1, 1877	113	33	11	761
190,687	Same.....Coupler for organs, &c	May 15, 1877	612	182	11	841
	Letts, Elizabeth W. (*See* Letts, Jeremiah S. and E. W.)					
197,480	Letts, Jeremiah S. and E. W., Ripon, Wis. Dish-cleaning machine	Nov. 27, 1877	799	238	12	902
197,520	Leuchsenring, Robert, assignor of one-half interest to M. P. Fichtenmayer, New Bedford, Mass. Illuminated clock	Nov. 27, 1877	842	251	12	908
193,452	Leuthy, Frank, Philadelphia, Pa. Ice-creeper	July 24, 1877	936	284	12	163
187,150	Levalley, Christopher W., Saint Paul, Minn. Harvester	Feb. 6, 1877	219	71, 72	11	232
192,871	Same.....same	July 10, 1877	339	100	12	66
193,122	Same.....same	July 17, 1877	592	179	12	108
	Leventhorpe, Collett. (*See* Wilder, Charles H., assignor.)					
193,123	Leverich, Edward, New York, N. Y. Ventilator for railway-cars	July 17, 1877	593	179	12	108
193,124	Same.....Sash-fastener	July 17, 1877	594	179	12	108
186,400	Levi, Isidor, Cincinnati, O. Indicator for drawing liquids from bottles	Jan. 16, 1877	601	181	11	191
187,647	Levi, Sigmund, Cincinnati, Ohio. Elevator	Feb. 20, 1877	734	227	11	319
187,648	Same.....Car-brake	Feb. 20, 1877	735	227	11	320
194,304	Levin, William, New York, N. Y. Mortising and tenoning machine	Aug. 21, 1877	546	165	12	324
192,378	Levine, Julius, assignor to American Paper Collar Company, New York, N. Y. Combined collar-box and lamp	June 26, 1877	918	276	11	1126

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
186,140	Levis, Cyrus, Philadelphia, Pa. Combined sash lift and fastener	Jan. 9, 1877	324	99	11	60
190,973	Levis, George H., Philadelphia, Pa. Lining for refrigerators	May 22, 1877	904	268	11	888
195,618	Same.....Covering for steam-pipes	Sept. 25, 1877	885	263	12	549
187,021	Levy, David H., assignor to self and G. W. Gumpert, New York, N. Y. Line-fastener	Feb. 6, 1877	102	35	11	216
189,633	Lewando, Charles, Boston, Mass. Loom-shuttle	Apr. 17, 1877	636	197	11	658
190,879	Lewars, John H., assignor of one-third interest to D. McCarty and E. A. Collins, Philadelphia, Pa. Safety-collar for lamps	May 15, 1877	790	234	11	865
193,525	Lewars, John H., and C. Klaitz, assignors to W. E. S. Baker, Philadelphia, Pa. Safety-valve for lamps	July 24, 1877	1009	304	12	173
	Lewin, George W. (*See* White & Lewin.)					
187,289	Lewine, Lyon, Brooklyn, N. Y. Extensible shawl-strap-bar	Feb. 13, 1877	370	118	11	265
189,759	Lewinsohn, Louis L., Berlin, Prussia. Machine for mounting flowers upon wire stems	Apr. 17, 1877	768	235 236	11	674
	Lewis, Benjamin B. (*See* Shepard & Lewis)	(Reissue.)				
	Lewis, Brainard S. (*See* Guild & Lewis.)					
	Lewis, Burdette A. (*See* Ellis & Lewis.)					
192,586	Lewis, Charles S., Bristol, and E. R. Lampson, Waterbury, Conn. Hollow metal knob	July 3, 1877	31	10	12	16
	Lewis, Daniel F. (*See* Fowler, Lewis, Smith & Fischer.)					
188,805	Lewis, Daniel L., Lovell's Station, assignor of one-half interest to W. Boynton, Petersburg, Pa. Pitman	Mar. 27, 1877	867	264	11	521
188,806	Lewis, Daniel L., Lovell's Station, and W. Boynton, Petersburg, Pa. Tubing and casing oil-wells	Mar. 27, 1877	868	261	11	521
194,447	Lewis, Daniel L., Lovell's Station, assignor of one-half interest to W. Boynton, Petersburg, Pa. Pump-rod adjuster	May 29, 1877	1364	412	11	958
194,448	Same.....Oil or other deep well pumps	May 29, 1877	1365	412	11	958
198,464	Lewis, Ebenezer E., Geneva, N. Y. Railway cross-tie	Dec. 25, 1877	794	241	12	1088
188,922	Lewis, Edward C., assignor to self and C. E. Taft, Auburn, N. Y. Machine for shaping springs	Mar. 27, 1877	978	299	11	536
	Lewis, Everett C. (*See* Bartlett & Lewis.)					
193,259	Lewis, Friend, and W. H., and D. O. Holman, Adams, N. Y. Fire-escape	July 17, 1877	729	222	12	127
	Lewis, George C. (*See* Reynolds, John R., assignor.)					
191,765	Lewis, George E., Seneca Falls, N. Y. Scroll sawing machine	June 12, 1877	246	78	11	1015
	Lewis, Henry. (*See* Dusch & Lewis.)					
196,812	Lewis, James, Chicago, Ill. Inhaler	Nov. 6, 1877	75	23	12	771
193,373	Lewis, James H., Detroit, Mich. Hand-tool for working moldings	July 24, 1877	862	264	12	153
198,492	Lewis, James J., New York, N. Y. Ice-creeper	Dec. 25, 1877	823	249	12	1089
7,616	Lewis, J. Edwin, Worcester, Mass. Corn-sheller	Apr. 17, 1877	847	261	11	685
7,617	Same.....Mechanical movement	(Reissue)..Apr. 17, 1877	849	261	11	685
196,301	Same.....Regulator for gas and other fluids	Oct. 23, 1877	659	190	12	678
	Lewis, John L., *et al.* (*See* Bingham & McTighe, assignors.)					
190,229	Lewis, John W., Scipio Township, Ohio. Grain-distributer	May 1, 1877	114	33	11	761
	Lewis, Oliver & Phillips. (*See* McGann, Patrick, assignor.)					
188,384	Lewis, Samuel W., Cincinnati, Ohio. Hydrant	Mar. 13, 1877	428	134	11	444
192,379	Same.....same	June 26, 1877	919	276	11	1126
	Lewis, Theodore G., *et al.* (*See* Fletcher, Thomas, assignor.)					
	Lewis, Thomas P., *et al.* (*See* Leach, Daniel R., assignor.)					
	Lewis, William D. (*See* Kearns, Lewis & Jenkins.)					
187,649	Lewis, William F., and R. T. Lattin, Waterbury, Conn. Napkin-holder	Feb. 20, 1877	736	227	11	320
195,028	Lewis, William F., assignor to Waterbury Clock Company, Waterbury, Conn. Clock-case	Sept. 11, 1877	283	86	12	447
	Lewis, William H. (*See* Lewis & Holman.)					
196,027	Lewis, William H., Brooklyn, assignor to E. & H. T. Anthony & Co., New York, N. Y. Picture-exhibitor	Oct. 9, 1877	351	100	12	618
	Lewis, William J., *et al.* (*See* Bingham & McTighe, assignors.)					
193,880	Lewis, William K., Boston, Mass. Canning beans and pork for food	Aug. 7, 1877	74		12	245
192,440	Lewis, William P., Oroville, Cal. Pneumatic tube for dredging	June 26, 1877	976	293	11	1134
195,293	Same.....Pneumatic dredging-tube	Sept. 18, 1877	569	165	12	496
187,764	Lewtas, John, Manchester, England. Lamp	Feb. 27, 1877	862	268	11	345
7,731	Leyde, William M., Newport, Minn. Thrashing-machine	(Reissue)..June 12, 1877	535	164	11	1052
189,242	Leyman, Fordyce A., Cleveland, Ohio. Vapor-burner	Apr. 3, 1877	211	71	11	587
187,873	Libby, Caleb A., Evansville, Wis. Mop-wringer	Feb. 27, 1877	972	302	11	359
189,476	Libby, Cyrus, Chicago, Ill. Congress-gaiter	Apr. 10, 1877	466	147	11	627
189,239	Libby, Thomas, assignor of one-half interest to H. C. Fuller, Minneapolis, Minn. Ironing-table	Apr. 3, 1877	205	69	11	586
192,774	Lichliter, John M., assignor to B. F. Grason, jr., Luray, Va. Machine for stuffing horse-collars	June 19, 1877	678	208	11	1082 1083
197,150	Lichtenfels, Friedrich, Newark, N. J. Chimney-cap	Nov. 13, 1877	437	129	12	831
197,937	Same.....Bracelet	Dec. 11, 1877	237	73	12	988
	Lichtenstein Brothers & Co. (*See* Glund, Carl, assignor)	(Reissue.)				
	Liddell, Forbes. (*See* Liddell, Walter J. F., assignor.)					
190,441	Liddell, Walter J. F., assignor to F. Liddell, Charlotte, N. C. Steam-engine	May 8, 1877	343	100	11	709
186,091	Liddell, William, Sandy Hill, N. Y. Check-rein hook	Jan. 9, 1877	277	83	11	54
186,092	Liddell, William, assignor of one-half interest to Howland & Co., Sandy Hill, N. Y. Paper-bag machine	Jan. 9, 1877	277	84, 85	11	54
197,870	Same.....same	Dec. 4, 1877	160	49	12	969
	Liddle, Robert Z. (*See* Van Buren & Liddle.)					
	Lidell, Robert, *et al.* (*See* Bates, Samuel A., assignor.)					
194,555	Lieb, John W., Newark, N. J. Handle for traveling-bags, &c	Aug. 28, 1877	805	239	12	365
194,556	Same.....Handle for traveling-bags, satchels, &c	Aug. 28, 1877	806	240	12	365
193,972	Liebmann, Hermann F. W., Chicago, Ill. Wash-board	Aug. 7, 1877	173	53	12	258
196,465	Lienau, Christian C., assignor to Adam Helmstaedtes, Newark, N. J. Faucet-shield	Oct. 23, 1877	815	234	12	700
195,221	Light, Harvey E., Rochester, N. Y. Steam-radiator	Sept. 18, 1877	494	146	12	486
197,481	Light, John H., Calhoun, Mo. Bee-hive	Nov. 27, 1877	800	239	12	902
189,477	Lightburn, Stafford, jr., San Francisco, Cal. Pipe-coupling	Apr. 10, 1877	466	147	11	627
197,871	Lightfoot, Luke, and J. J. Hawk, Downey, Iowa. Culinary apparatus	Dec. 4, 1877	163	50	12	969
	Liles, La Fayette W. (*See* Liles, William W. and L. W.)					
191,688	Liles, La Fayette W., Jackson, Miss. Plow	June 5, 1877	168	52	11	999
198,634	Liles, William W., Roanoke, Ala., and L. W. Liles, Jackson, Miss. Book-rest	Dec. 25, 1877	958		12	1109
198,032	Lillard, Trenton W., assignor to self and B. F. Grayson, jr., Luray, Va. Car-axle box	Dec. 11, 1877	327		12	1002
193,973	Lillie, Lewis, Elizabeth, N. J. Time-lock	Aug. 7, 1877	173	53	12	258
	Lillis, Frank C., *et al.* (*See* Rebasz, Lyman A., assignor.)					
197,557	Lillis, Frank C., Lockport, N. Y. Faucet	Nov. 27, 1877	883	263	12	913
193,338	Lilly, George, York, Wis. Rotary engine	July 24, 1877	828	254	12	148
194,830	Lilly, William H., assignor to C. H. R. Triebels, Philadelphia, Pa. Joiners' clamp	Sept. 4, 1877	74	24	12	411

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. D'rg.	Official Gazette. Vol.	Official Gazette. Page.
194,522	Lincke, Rudolph F., Oakland, Cal. Game-table	Aug. 28, 1877	776	230	12	361
198,635	Lincoln, Albert L., Bethel, Vt. Horseshoe	Dec. 25, 1877	958	292	12	1109
	Lincoln, Horatio B., *et al.* (*See* Knowles, Proctor & Pendleton, assignors.)					
	Lindauer, Dionys. (*See* Huber, Lindauer & Lerché.)					
189,865	Lindblad, Olof, Jamestown, N. Y. Cutter-head	Apr. 24, 1877	892	273	11	699
193,881	Lindbom, Carl, Stockholm, Sweden. Mower	Aug. 7, 1877	75	24	12	245
8,018	Lindemann, Otto, Edgewater, N. Y. Fountain-cup for animal-cages (Reissue)	Dec. 25, 1877	1073	325	12	1125
196,684	Same same	Oct. 30, 1877	1049	304	12	743
	Linden, Jacob. (*See* Dunnebache & Linden.)					
	Linderberry, Horace J. (*See* Popplewell, Theodore S., assignor.)					
194,606	Lindfors, Louis, and C. Schultz, Boston, Mass. Stiffened or sized hat-body	Aug. 28, 1877	847		12	371
197,224	Lindley, Chambers Z., assignor to A. T. Brooks, Mount Pleasant, Iowa. Tire-tightener	Nov. 20, 1877	529	156	12	852
	Lindmeier, Frederick. (*See* Tures, George N., assignor.)					
	Lindsay & Co., James. (*See* Harcum, Andrew, assignor.)					
197,872	Lindsay, Alexander P., Northumberland, Pa. Manufacture of drawheads	Dec. 4, 1877	164	50	12	969
193,008	Lindsay, David, Pittsburg, Pa. Feathering paddle-wheels	July 10, 1877	462	140	12	84
189,563	Lindsay, George F., Sherman, Tex. Leather-cutting gage	Apr. 17, 1877	570	177	11	649
	Lindsay, James H. (*See* Wilson, Erasmus, assignor.)					
	Same (*See* Smith, Joseph M., assignor.)					
195,029	Lindsay, Thomas J., Windfall, Ind. Line-fender for harness	Sept. 11, 1877	283	86	12	447
195,378	Lindsey, Hosea, Asheville, N. C. Brick-machine	Sept. 18, 1877	645	191	12	507
	Lindsey, James H. (*See* Walkinshaw, Samuel L., assignor.)					
197,737	Lindsey, Stephen, Bushnell, Ill. Apparatus for raising water from running streams	Dec. 4, 1877	32	11	12	951
188,807	Lindsley, Edward, Cleveland, Ohio. Gas-lighter	Mar. 27, 1877	869	{264 265}	11	521
196,981	Same Device for lighting and extinguishing gas	Nov. 13, 1877	262	77	12	805
197,151	Same same	Nov. 13, 1877	437	129	12	831
197,938	Lindsley, Frank H., Dover, N. J. Weighing device	Dec. 11, 1877	237	73	12	988
	Lindsley, Isaac. (*See* Card & Lindsley.)					
194,693	Link, David C., New York, N. Y. Preserving meats	Aug. 28, 1877	926	276	12	382
	Linscott, Daniel H. (*See* Sanderson & Linscott.)					
191,062	Linscott, John M., West Buxton, Me. Filling stop-motions for looms	May 22, 1877	989	294	11	899
186,012	Linsley, John S., New York, N. Y. Ventilating, warming, and cooling railway-cars	Jan. 9, 1877	204	62	11	44
186,013	Same Fire-place	Jan. 9, 1877	205	62	11	44
186,739	Same Car-heater	Jan. 30, 1877	936	290	11	169
193,414	Lintz, Adam C., Sweet Air, Md. Grain-tally, bag-holder, and weigher	July 24, 1877	900	274	12	158
189,240	Lipe, Charles E., Ilion, assignor of one-third interest to E. D. Bronson, Amsterdam, and A. Walrath, Fort Plain, N. Y. Broom-machine	Apr. 3, 1877	205	70, 71	11	586
194,523	Lipe, Charles E., Ilion, N. Y. Fluid-meter	Aug. 28, 1877	776	231	12	361
	Lipe, William M. (*See* Starnes & Lipe.)					
7,992	Lipman, Hymen L., assignor, by mesne assignments, to J. Reckendorfer, New York, N. Y. Pencil (Reissue)	Dec. 11, 1877	488	152	12	1024
197,738	Lippe, Charles, New York, N. Y. Picture-frame	Dec. 4, 1877	32	11	12	951
	Lippincott, Benjamin R., *et al.* (*See* Cook, Isaac, assignor.)					
190,344	Lippincott, James, jr., Mount Holly, N. J. Corn-shelling machine	May 1, 1877	225	67	11	776
186,857	Lippingood, Tilghman F., Gardner, Ill. Peg-float	Jan. 30, 1877	1062	328	11	185
188,473	Lippitt, Andrew C., New London, Conn. Apparatus for the manufacture of gas	Mar. 20, 1877	528	163	11	466
194,097	Lippitt, John E., Wilmington, N. C. Portable ice-house	Aug. 14, 1877	316	93	12	284
197,939	Lipps, Johann P., Dresden, Saxony. Beer-cooler	Dec. 11, 1877	238	73	12	989
189,634	Lips, Jacob, Louisville, Ky. Car-coupling	Apr. 17, 1877	637	197	11	658
186,141	Lipscomb, Judie D., Andrews, Va. Remedy for fever	Jan. 9, 1877	325		11	60
186,401	Lipsey, Andrew B., West Hoboken, N. J., assignor, by mesne assignments, to Pulverizing and Manufacturing Company. Pulverizing-machine	Jan. 16, 1877	602	185	11	102
193,667	Lipsey, Andrew B., West Hoboken, N. J. Wrench	July 31, 1877	1177	353	12	206
	Lippy, David. (*See* Stocking & Lippy.)					
194,831	Lirette, Ozema A., Houma, La. Child's bed-mat	Sept. 4, 1877	75	25	12	411
197,873	Lister, James, Oakland, Cal. Plate-printing press	Dec. 4, 1877	166	50	12	969
190,880	Littfin, Johan, Oshkosh, Wis. Bob-sled	May 15, 1877	790	234	11	865
186,353	Little, Benjamin F., assignor to self and R. B. Prindle, Norwich, N. Y. Folding-chair	Jan. 16, 1877	548	{166 167}	11	95
191,689	Same same	June 5, 1877	168	52	11	999
	Little, Charles G. (*See* Squire & Little.)					
	Little, Cornelia. (*See* Little, John W., assignor.)					
7,653	Little, George H., Peabody, Mass. Injector or ejector for steam-engines (Reissue)	May 1, 1877	301	88	11	{785 786}
195,873	Little, John W., assignor to C. Little, Muncie, Ind. Feather-duster	Oct. 2, 1877	181	51, 52	12	587
	Little, Joseph D. (*See* Ballard, Pursell & Little.)					
186,740	Little, Robert G., Halifax, Nova Scotia. Snow-plow	Jan. 30, 1877	937	291	11	169
192,587	Little, William, Heckington Hall, near Sandford, England. Sheep-wash	July 3, 1877	32		12	17
	Littlefield, Edward, *et al.* (*See* Johnson, James B., assignor.)					
	Littlefield, Edward F., *et al.* (*See* Johnson, James B., assignor.)					
192,772	Littlefield, Harvey, Fitchburg, Mass. Ironing-table	July 3, 1877	213	62	12	41
198,518	Littlefield, John W., Boston, Mass. Ash-sifter	Dec. 25, 1877	846	258	12	1092
193,166	Littlejohn, Charles F., New Haven, Conn. Hose-coupling	July 17, 1877	628	190	12	114
198,033	Littlejohn, William, Jefferson, Tex. Rifle-barrel	Dec. 11, 1877	328	102	12	1003
188,647	Littlepage, Europe F., Los Angeles, Cal. Automatic feeder for furnaces	Mar. 20, 1877	690	212	11	489
193,165	Littleton, William R., Valley Mills, Tex. Hoe-handle	July 17, 1877	627	190	12	114
197,644	Livermore, Frederick D., Rochester, Minn. Heating-stove	Nov. 27, 1877	971	289	12	926
191,351	Livermore, Horatio G., San Francisco, Cal. Ore-roasting furnace	May 29, 1877	1272	384	11	946
188,522	Livermore, Ray F., Port Henry, N. Y. Baggage-check	Mar. 20, 1877	574	177	11	472
194,694	Livesey, James, J. Edwards, and W. Jeffreys, assignors to J. Saxby and J. S. Farmer, London, England. Apparatus for locking railway-switches	Aug. 28, 1877	928	276	12	382
198,399	Livick, George W., Mill Brook Depot, Va. Car-coupling	Dec. 18, 1877	715	217	12	1065
141,823	Livingston, David M., Needham, Mass. Nest-egg	Aug. 7, 1877	29	9	12	238
	Livingston, Joseph W. (*See* Nichols & Livingston.)					
194,778	Livingston, Louis, Boston, Mass. Fire and marine escape	Sept. 4, 1877	24	8	12	404
197,383	Livingstone, Josiah E., Goffstown, assignor to C. H. Livingstone, Salem, N. H. Nutmeg-grater	Nov. 20, 1877	686	206	12	877
	Livingstone, Charles H. (*See* Livingstone, Josiah E., assignor.)					
	Lloyd, Bryan L. (*See* Ough, Lloyd & Johnson.)					
195,828	Lloyd, Charles, Harriettsville, Ohio. Pruning-shears	Oct. 2, 1877	134	38	12	580
194,557	Lloyd, John C., Northumberland, Pa. Meat-chopper	Aug. 28, 1877	807	240	12	365
	Lloyd, Samuel W. (*See* Coakley & Lloyd.)					
190,502	Lloyd, Samuel W., and W. L. Coakley, Washington, D. C. Ticket-case	May 8, 1877	407	119	11	807

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
195,294	Lloyd, Seth, Conshohocken, Pa. Valve	Sept. 18, 1877	570	166	12	496
	Lloyd, Supplee & Walton. (*See* Bonney, Charles S., assignor) (Reissue.)					
	Lobdell Car Wheel Company. (*See* Megaw, Jarrett, assignor.)					
	Lobdell Car Wheel Company *et al.* (*See* Savery, Thomas H., assignor.)					
191,690	Lobdell, George G., Wilmington, Del. Casting pulleys	June 5, 1877	170	53	11	999
191,981	Lobdell, William W., Wilmington, Del. Casting grooved palleys	June 12, 1877	463	142	11	1042
191,983	Same same	June 12, 1877	464	143	11	1042
189,115	Locher, Edward, and C. Knispel, Newark, N. J. Metal shingle	Apr. 3, 1877	91	33	11	571
188,743	Lochhead, John, San Francisco, Cal. Windmill	Mar. 27, 1877	794	243	11	511
7,741	Locke, Edward A., Boston, Mass. Metallic seal (Reissue)	June 12, 1877	547	167	11	1053
187,396	Same same	Feb. 13, 1877	477	149	11	279
193,167	Locke, Edward A., Boston, Mass., assignor to Benedict & Burnham Manufacturing Company, Waterbury, Conn. Revenue-stamp	July 17, 1877	629	191	12	114
143,824	Locke, Francis, Gloucester, Mass. Derrick-step	Aug. 7, 1877	29	9	12	238
195,140	Locke, Herbert G., Waterville, N. Y. Hop-picking machine	Sept. 11, 1877	397	119	12	464
189,635	Locke, Joseph R., Amesbury, Mass. Oscillating cutter-head for finishing spokes	Apr. 17, 1877	657	197	11	658
	Locke, Sylvanus D. (*See* Lancaster, Israel, assignor) (Reissue.)					
7,701	Locke, Sylvanus D., Hoosick Falls, N. Y. Grain-binder (Reissue)	May 22, 1877	1152	345 346	11	922
186,940	Lockey, James T., Northwich, England. Evaporating-pan	Feb. 6, 1877	28	11	11	205 206
	Lockey, Joseph. (*See* Shiver, Elisha, assignor.)					
195,829	Lockhart, John, Philadelphia, Pa. Stuffing-box	Oct. 2, 1877	434	38	12	580
195,619	Lockwood, Byron H., Stamford, Conn. Machine for making spiral springs	Sept. 25, 1877	885	263	12	549
194,920	Lockwood, David C., assignor to Celluloid Harness Trimming Company, Newark, N. J. Die for molding plastic material	Sept. 4, 1877	161	51	12	422
194,695	Lockwood, Edward J., Danbury, Ohio. Wheeled harrow	Aug. 28, 1877	929	276	12	382
196,914	Same Bolt-lock	Nov. 6, 1877	188	54	12	786
7,753	Lockwood, James K., Alpena, Mich. Circular saw (Reissue)	June 19, 1877	852	258	11	1105
	Lockwood, Lewis. (*See* Goodman, Henry, assignor.)					
187,151	Lockwood, Stephen F., assignor of one-half interest to E. White, Stamford, Conn. Chain-pump bucket	Feb. 6, 1877	220	72	11	233
187,291	Lockwood, William N., Campville, Conn. Clothes-pin	Feb. 13, 1877	373	119	11	265
198,400	Loeb, Charles, New York, N. Y. Scarf	Dec. 18, 1877	716	217	12	1065
188,648	Loeske, Louis, assignor of one-half interest to A. L. Wood, New York, N. Y. Sewing-machine needle	Mar. 20, 1877	692	213	11	489
193,767	Loff, John, Whitewater, Wis. Cloth-measuring machine	July 31, 1877	1268	380	12	219
187,720	Loffler, Bernhart, and J. Weil, New York, N. Y. Combined vest and shirt-front	Feb. 27, 1877	823	256	11	340
194,921	Lofstedt, Beugt G., Chicago, Ill. Lamp-stove	Sept. 4, 1877	164	51	12	422
194,696	Loftus, John, East Albany, assignor of one-half interest to R. Greenalch, Greenbush, N. Y. Stuffing-box for steam-engines	Aug. 28, 1877	930	276	12	382
194,697	Logan, John F., Indianapolis, Ind. Hose-leak stopper	Aug. 28, 1877	931	277	12	382
191,352	Lohmeyer, Paul, Cleveland, Ohio. Valve for twin engines	May 29, 1877	1273	384	11	947
193,716	Loller, Charles W., Unionville, Pa. Milk-cooler	July 31, 1877	1217	365	12	212
	Lomas & Co., William. (*See* Lomas, William, assignor.)					
194,254	Lomas, William, assignor to W. Loomis & Co., Cincinnati, Ohio. Pipe-tongs	Aug. 14, 1877	482	145	12	306
	Lomax, George H. (*See* Dyott, Michael B., assignor) (Reissue.)					
	Lomb Henry, *et al.* (*See* Gundlach, Ernst, assignor.)					
196,028	Lomb, Henry, Brooklyn, and F. Scharpf, Rochester, N. Y.; said Scharpf assignor to said Lomb. Apparatus for the focal measurement of optical lenses	Oct. 9, 1877	352	100	12	619
193,453	Lombard, Hezekiah, assignor to self and J. J. Bohler, Westfield, Mass. Sewing-machine attachment for piercing whip-covers	July 24, 1877	936	284	12	163
198,546	Lombart, Auguste, Buffalo, N. Y. Bed-bottom	Dec. 25, 1877	871	265	12	1096
	Lomont, Francois T., *et al* (*See* Brown, James O., assignor.)					
186,858	Lomont, Francois T., and J. O. Brown, assignors, by mesne assignments, of part interest to E. Bayliss, Massillon, Ohio. Harvester	Jan. 30, 1877	1062	329	11	185
	Long, Charles H. (*See* Coppel, Jacob F., assignor.)					
189,866	Long, David W., Parkersburg, W. Va. Hinge	Apr. 24, 1877	892	273	11	629
190,601	Long, Edwin, and L. E. Lyon, Iowa City, Iowa. Device for converting motion	May 8, 1877	500	149	11	820
	Long, Eli, *et al.* (*See* Ward, William C., assignor.)					
190,881	Long, Francis W., Philadelphia, Pa. Bird-cage support	May 15, 1877	791	234	11	865
188,523	Long, James, jr., assignor to J. Long, sr., Philadelphia, Pa. Shuttle-box motion for power-looms	Mar. 20, 1877	575	177	11	473
189,896	Long, John M., Hamilton, Ohio. Cultivator	Apr. 24, 1877	926	282	11	703
192,520	Long, John P., assignor of one-half interest to H. W. Huff, Delaware, Ohio. Bee-hive	June 26, 1877	1058	318	11	1144
192,773	Long, Oliver, Brooklyn, and P. H. Drake, New York, N. Y. Adhesive substance	July 3, 1877	214		12	41
196,531	Long, Oliver, Brooklyn, N. Y., assignor of one-half interest to C. M. Cook, Chicago, Ill. Lining and packing pape	Oct. 30, 1877	904	261	12	723
193,882	Long, Samuel N., assignor of three-fifths interest to S. S. Baker and E. Small, Dennis, Mass. Lamp-extinguisher	Aug. 7, 1877	75	24	12	245
196,029	Long, William F., assignor to self and M. and J. A. Parkison, Riceville, Tenn. Churn	Oct. 9, 1877	354	100	12	619
191,805	Long, William H., and A. W. Castle, San José, Cal. Mercury-condenser	June 12, 1877	287	90	11	1020
	Longacre, Francis D (*See* Walter, John, assignor.)					
186,142	Longacre, Manah C., Morris, Ill. Washing-machine	Jan. 9, 1877	325	99	11	60
185,939	Longden, Charles E., Naugatuck, Conn. Process and apparatus for forming rubber articles	Jan. 2, 1877	131	39	11	25
194,449	Longley, Abner H., jr., Paola, Kans., assignor to M. Mumford and M. M. Morrison, Kansas City, Mo Addressing-machine	May 29, 1877	1366	412	11	953
	Longley, Charles H. (*See* Burghardt, John H., assignor.)					
193,974	Longman, Walter, Brooklyn, N. Y. Mixed paint	Aug. 7, 1877	175		12	258
186,587	Longstreth, Edward, assignor to self, G. Burnham, C. T. Parry, E. H. Williams, W. P. Henszey, and J. H. Converse, Philadelphia, Pa. Exhaust apparatus for locomotives	Jan. 23, 1877	790	243	11	139 140
187,978	Longstreth, Edward assignor of part interest to G. Burnham, C. T. Parry, E. H. Williams, W. P. Henszey, and J. H. Converse, Philadelphia, Pa. Car-wheel	Mar. 6, 1877	23	6	11	383
195,716	Longstreth, Edward, assignor to Burnham, Parry, Williams & Co., Philadelphia, Pa. Ventilating steam street-cars	Oct. 2, 1877	29	9	12	564
189,365	Longsworth, Miron V., Delphos, Ohio. Harness-pad	Apr. 10, 1877	361	116	11	614
189,116	Lontin, Dieudonne F. J., Paris, France. Dynamo-electric machine	Apr. 3, 1877	92	33	11	571
189,636	Looker, John M., Abilene, Kans Plow	Apr. 17, 1877	638	194	11	658
187,471	Loomis, John S., Brooklyn, N. Y. Molding-machine	Feb. 20, 1877	569	176	11	297
187,472	Same Sectional pressure-bar for planing and molding machine	Feb. 20, 1877	570	176	11	298
7,586	Loomis, Thomas T., Chicago, Ill. Steam pile-driver (Reissue)	Apr. 3, 1877	272	88, 89	11	594

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
192,834	Lopez, Isaac, New York, N. Y. Line-indicator for books	July 10, 1877	306	89	12	62
	Lorch, Ulrich. (*See* Senft & Lorch.)					
	Lord, C. W. (*See* Marden, Samuel, assignor.)					
195,295	Lord, Francis E., Readsborough, Vt. Sap-spout	Sept. 18, 1877	570	166	12	496
197,384	Lord, George, Baltimore, Md. Dredging-bucket	Nov. 20, 1877	687	206	12	877
7,935	Lord, John P., Manchester, N. H., assignor to U. Pratt, Deep River, Conn. Key for musical instruments (Reissue)	Nov. 6, 1877	236	71	12	793
194,779	Lord, Tyler C., Joliet, Ill. Car-coupling	Sept. 4, 1877	25	8	12	404
194,524	Lorenz, William A., and C. D. Hughes, assignors to S. W. Green, Brooklyn, N. Y. Distributed type-carrier	Aug. 28, 1877	777	231	12	361
7,641	Loretz, Arthur J. L., Brooklyn, N. Y. Compound high and low pressure steam-pump (Reissue)	Apr. 24, 1877	1180	356	11	737
7,693	Lorillard, Blase, Rhinebeck, N. Y. Tobacco-pipe (Reissue)	May 22, 1877	1134	343	11	921
	Loring & Blake Organ Company. (*See* Boynton, Newell M., assignor.)					
	Loring, David. (*See* Rich, Dwight B., assignor.)					
	Loring, David B. (*See* Wheeler, Loring & Coy.)					
193,975	Loring, David B., Boston, assignor of one-half interest to J. E. Wheeler, Lynn, Mass. Horseshoe-nail	Aug. 7, 1877	177	54	12	258
	Loring, Gayton P., *et al.* (*See* Barker, Robert F., assignor.)					
187,875	Loring, Silas H., Lawrence, Mass. Tool for inserting rings in hose	Feb. 27, 1877	974	302	11	360
196,366	Same.....Tobacco-cutter	Oct. 23, 1877	724	208	12	687
193,374	Loring, Thacher, Brookline, Mass. Combined truck and skid	July 24, 1877	863	264	12	153
193,096	Loscher, Christ, Chicago, Ill. Sewer-cleaner	July 17, 1877	569	171	12	105
191,450	Losee, Cyrus, Brooklyn, N. Y. Apparatus for drying tobacco	May 29, 1877	1368	413	11	958
191,806	Loskamp, Conrad, East Coldenham, N. Y. Raising and transplanting plants	June 12, 1877	988	90	11	1020
193,339	Lothrop, Daniel, Boston, Mass. Box and book shelf	July 24, 1877	828	254	12	148
193,340	Same.....Papetorie and writing-case	July 24, 1877	830	254	12	149
	Lott, Elisha B., *et al.* (*See* Maas, Albert W. M., assignor.)					
196,237	Lottier, Lawrence, jr., assignor to L. Lottier, sr., Richmond, Va. Labeling plug-tobacco	Oct. 16, 1877	580	167	12	658
186,402	Lottridge, Francis M., Jonesborough, Ind. Lifting-jack	Jan. 16, 1877	605	185	11	102
198,636	Loud, Herbert, Boston, Mass. Pulley attachment for gaffs	Dec. 25, 1877	959	292	12	1109
	Loud, Samuel C. (*See* Eells & Loud.)					
187,022	Loughridge, William, Baltimore, Md. Ingress-valve	Feb. 6, 1877	102	35	11	216
187,023	Same.....Hose and pipe coupling	Feb. 6, 1877	103	35	11	216
187,024	Same.....Atmospheric car-brake	Feb. 6, 1877	104	35	11	216, 217
192,441	Louth, Adam W., Philadelphia, Pa. Building	June 26, 1877	977	293	11	1134
	Loveall, A. S. (*See* Duty, Michael K., assignor.)					
196,367	Lovelace, Stephen P., Lancaster, assignor, by mesne assignments, to J. Short, Columbus, Ohio. Vehicle-axle skein	Oct. 23, 1877	725	208	12	687
	Lovell, administrator. (*See* Coes, Aury G.)					
	Lovell, Frank H., *et al.* (*See* Fowler, Samuel W., assignor) (Reissue)					
187,152	Lovell, Melvin N., assignor to F. F. Adams & Co., Erie, Pa. Clothes-wringer	Feb. 6, 1877	220	72	11	233
198,493	Lovell, Melvin N., Erie, Pa. Wringer	Dec. 25, 1877	823	249	12	1089
198,494	Same.....same	Dec. 25, 1877	824	250	12	1089
	Lovell, Orville D. (*See* Fowler, Samuel W., assignor) (Reissue)					
192,380	Lovell, William, Jersey City, N. J., assignor to H. P. Tibbals, Brooklyn, N. Y. Folding-chair	June 26, 1877	922	276	11	1126
	Lovett, Alfred, *et al.* (*See* White, Orpheus, assignor.)					
188,474	Lovett, George L., Fitchburg, Mass., assignor to self and J. T. Emerson, Claremont, N. H. Paper-pulp washer	Mar. 20, 1877	530	163	11	467
	Lovett, Samuel I., *et al.* (*See* Clements, George S., assignor.)					
	Low, Daniel, *et al.* (*See* Shaw, Ai B., assignor.)					
187,473	Lowe, Garrett W., Erie, Pa. Mechanical movement	Feb. 20, 1877	571	177	11	298
195,764	Same.....Pump-piston	Oct. 2, 1877	71	21	12	571
	Low, Joel B. (*See* Grim & Low.)					
188,385	Low, Oscar, Hyde Park, Mass. Machine for cleaning wool and other material	Mar. 13, 1877	431	134	11	444
195,031	Lowe, Nathaniel M., Boston, assignor to J. H. Wright, Nahant, Mass. Oscillating register	Sept. 11, 1877	285	87	12	447
191,868	Lowe, William, Bridgeport, Conn. Feed-water heater	June 12, 1877	350	108	11	1027
193,526	Same.....Steam-generator	July 24, 1877	1010	304	12	173
196,368	Lowell, A. Henry, Manchester, N. H. Sewer-trap	Oct. 23, 1877	725	209	12	687
187,651	Lowell, Azman J., Alvarado, Cal. Manufacture of tea-kettles, &c	Feb. 20, 1877	737	228	11	320
188,249	Lowell, Judson C., Jackson, Mich. Mail-bag	Mar. 13, 1877	294	92	11	426
191,353	Lowell, Richard, Flushing, N. Y. Water-hook for harness	May 29, 1877	1274	384	11	947
	Lowell, Seth W. (*See* Fletcher, George E., assignor.)					
	Lowenthal, Julius. (*See* Bradley, William P., assignor.)					
195,630	Lowerre, Thomas R., assignor to self and R. U. Wright, Mott Haven, N. Y. Feed-bag	Sept. 11, 1877	284	87	12	447
188,745	Lowery, John, assignor to Excelsior Flint Glass Company, Pittsborg, Pa. Glass-annealing furnace	Mar. 27, 1877	796	244	11	512
	Lowman, Davis. (*See* Hoadley, Richard, assignor.)					
	Lowmiller, David. (*See* Purviance, Thomas, assignor.)					
196,915	Lownsdale, James P. O., Portland, Oreg. Can-opener	Nov. 6, 1877	188	55	12	786
194,044	Lowry, Horace S., Farmer City, Ill. Churn	Aug. 14, 1877	264	78	12	277
196,685	Lowry, John, and D. Hunt, Ann Arbor, Mich. Wind-wheel	Oct. 30, 1877	1050	305	12	743
192,269	Lowth, James, Chicago, Ill. Whip-socket	June 19, 1877	783	238	11	1096
187,542	Lowth, Michael F., Owatonna, Minn. Mower	Feb. 20, 1877	631	196	11	306
196,238	Lowth, Michael F., T. J. Howe, and H. N. Labare, Owatonna, Minn. Mowing-machine	Oct. 16, 1877	581	168	12	658
	Loyd, John. (*See* Malmquist, Neil, assignor.)					
186,859	Loyd, Samuel P., Cassandra, Ga. Corn-planter	Jan. 30, 1877	1664	329	11	185
190,149	Lozier, Abraham W., Orange, N. J., assignor, by mesne assignment, to J. D. Lozier, New York, N. Y. Health-lift	May 1, 1877	37	11	11	751
190,150	Same.....same	May 1, 1877	39	11	11	751
190,151	Lozier, Abraham W., assignor, by mesne assignments, to J. D. Lozier, New York, N. Y. Exercising-machine	May 1, 1877	40	12	11	751, 752
190,503	Same.....same	May 8, 1877	408	119	11	807
	Lozier, J. D. (*See* Lozier, Abraham W., assignor.)					
7,896	Lubin, Leon T. J., Boston, Mass. Hernia-truss (Reissue)	Sept. 25, 1877	957	286	12	560
189,564	Lublinski, Robert, London, England, assignor to A. S. Fitch, New York, N. Y. Umbrella-tip cup	Apr. 17, 1877	571	177	11	649
191,691	Lucas, Christian E., Atlanta Ga. Lavatory for sleeping-cars	June 5, 1877	170	53	11	999

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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193,009	Lucas, Christian E., Atlanta, Ga. Sleeping-car	July 10, 1877	464	140 141	12	84
189,943	Lucas, John J., Belleville, Ill. Bed-bottom	Apr. 24, 1877	968	296	11	709
193,010	Lucas, Joseph F., assignor of one-half interest to J. H. Falconer, Washington, D. C. Glue-pot kettle	July 10, 1877	465	141	12	84
186,589	Lucas, Robert H., San Francisco, Cal. Ice-machine	Jan. 23, 1877	792	244	11	140
193,375	Same.....Refrigerating by means of ammonia	July 24, 1877	864	264	12	153
	Lucas, Simeon H. (*See* Fisher & Lucas.)					
	Lucasse, Ary. (*See* Newell & Lucasse.)					
188,524	Luce, George D., New Orleans, La. Washing-machine	Mar. 20, 1877	576	178	11	473
191,869	Luce, Shubael K., Attleborough, Mass. Device for cleaning smoking-pipes	June 12, 1877	350	108	11	1027
194,832	Luciani, Germain, Paris, France. Bed-bottom	Sept. 4, 1877	76	25	12	411
	Luckenbach, August. (*See* Sibley, Holmwood & Luckenbach.)					
197,521	Luckhaupt, Adam, Columbus, Ohio. Machine for dressing staves	Nov. 27, 1877	843	252	12	908
189,565	Ludden, Franklin, assignor of one-half interest to C. E. Alvord, Bridgeport, Conn. Scythe-fastening	Apr. 17, 1877	571	177	11	649
7,579	Luders, Thomas L., Philadelphia, Pa., assignor, by mesne assignments, to G. Draper & Sons. Bobbin and thread-holder for spinning-machines (Reissue)	Mar. 27, 1877	1077	332	11	550
188,744	Ludi, John J., Santa Fé, N. Mex. Disintegrating solution for gold and silver bearing ores	Mar. 27, 1877	795		11	512
197,784	Ludlow, John M., and S. C. Pruitt, Hall, Ind. Circular-toothed pulverizer and cultivator	Dec. 4, 1877	81	25	12	957
198,204	Same.....Cultivator	Dec. 18, 1877	521	161	12	1037
198,637	Ludlow, Richard C., Saint Louis, Mo. Atmospheric filter	Dec. 25, 1877	959	293	12	1110
191,536	Ludlow, Samuel W., Cincinnati, Ohio. Vehicle spring and axle	June 5, 1877	30	9	11	980
	Ludlow Valve Manufacturing Company. (*See* Church, William L., assignor.)					
192,175	Ludlum, James, Pompton, N. J. Coiled spring	July 19, 1877	679	208	11	1083
192,703	Same..... Spiral car-spring	July 3, 1877	153	43	12	34
194,157	Same Spiral spring	Aug. 14, 1877	396	118	12	293
	Ludwig, Frederick W. (*See* Brookmann, Anton, assignor.)					
193,976	Ludwig, Frederick W., Cincinnati, Ohio. Button-fastening	Aug. 7, 1877	178	54	12	258
	Ludwig, Romanus P. (*See* Miller & Ludwig.)					
194,875	Luehrs, Michel D., Cleveland, Ohio. Screw-swaging machine	Sept. 4, 1877	117	36	12	417
187,876	Lufkin, Charles M., Alstead, N. H., and C. G. Allen, Barre, Mass.; said Lufkin assignor to said Allen. Horse hay-rake	Feb. 27, 1877	975	303	11	360
191,006	Lufkin, John W. and R. H., Chelsea, Mass. Machine for cutting and folding leather	May 22, 1877	938	277 278	11	892
	Lufkin, Richard H. (*See* Lufkin, John W. and R. H.)					
	Luhrs, Adolph. (*See* Keegan & Luhrs.)					
191,982	Luhrs, Adolph, New York, N. Y. Vent-faucet	June 12, 1877	464	143	11	1042
192,588	Same.....same	July 3, 1877	32	10	12	17
196,369	Lumaghi, Octavius, Collinsville, Ill. Zinc-smelting furnace	Oct. 23, 1877	726	209	12	687
192,075	Lumbard, Henry, Chicago, Ill. Brush	June 19, 1877	583	177	11	1070
	Lumbert, Daniel. (*See* Lumbert, Leonard L. and D.)					
198,641	Lumbert, Leonard L. and D., Marston's Mills, Mass. Cranberry-gatherer	Dec. 25, 1877	963	294	12	1110
197,385	Lumbye, Hans, Brooklyn, N. Y. Roller-skate	Nov. 20, 1877	688	206	12	877
	Lumley, James L. (*See* Respess & Lumley.)					
195,296	Lummus, William W., Lynn, Mass. Head-board for bedsteads	Sept. 18, 1877	571	166	12	496
191,604	Lund, Hans I., Charlotte, Iowa. Harrow	June 5, 1877	87	26	11	988
	Lunger, Martin V. (*See* Hutchinson & Lunger.)					
	Lunt, Wilbur F., *et al.* (*See* Graham, Edmund H., assignor.)					
198,640	Lupold, David E., Driftwood, Pa. Fence	Dec. 25, 1877	963	293	12	1110
198,639	Luppert, George, Williamsport, Pa., assignor to R. Cromwell and F. B. Sloan, Baltimore, Md. Bedstead-fastening	Dec. 25, 1877	961	293	12	1110
195,141	Lusby, John R., and S. G. Bentley, Le Grand, Iowa; said Bentley assignor to said Lusby. Harness-buckle	Sept. 11, 1877	399	120	12	464
186,486	Luscomb, William S., Providence, R. I. Bolster and step for spinning-machines	Jan. 23, 1877	693	213	11	126
192,924	Luster, John, East Joplin, Mo. Lift-pump	July 10, 1877	387	115	12	73
	Lute, George F. (*See* Bartlett & Lowis, assignors.)					
190,600	Luther, Charles A., Pawtucket, R. I. Cloth-spreader, &c	May 8, 1877	498	148	11	819
186,403	Luther, James H., Karns City, Pa. Link for valve-gears of steam-engines	Jan. 16, 1877	606	185	11	102
	Luther, Jonathan, *et al.* (*See* Sanders, Henry M., assignor.)					
189,117	Luther, Lobbens T., Mill Village, Pa. Preserving and finishing pictures	Apr. 3, 1877	94		11	571
195,937	Lutz, George W., Wheeling, W. Va. Hydrant and hose plug	Oct. 9, 1877	261	73	12	605
189,241	Lux, John and P., Hopkinton, Iowa. Hay-elevator	Apr. 3, 1877	210	71	11	587
193,977	Lux, John, Hopkinton, Iowa. Horse hay-fork	Aug. 7, 1877	180	54	12	258
	Lux, Philip. (*See* Lux, John and P.)					
191,870	Lyall, David C., Brooklyn, N. Y. Manufacture of tobacco	June 12, 1877	351	108	11	1028
191,692	Lyall, James, New York, N. Y. Take-up for looms	June 5, 1877	171	53	11	999
	Lybarger, John P. (*See* Osborn & Lybarger.)					
	Lydston, John E., *et al.* (*See* Darling, Charles E., assignor.)					
189,761	Lykke, Christian E., Grand Island, Nebr. Water-elevator	Apr. 17, 1877	770	236	11	674
191,693	Lyle, William, Philadelphia, Pa. Bench-dog	June 5, 1877	172	53	11	999
	Lyle, W. W., *et al.* (*See* Teed, Lorenzo P., assignor.)					
	Lyman, Adelvin B. (*See* Lyman, Fordyce A. and A. B.)					
187,153	Lyman, Azel S., New York, N. Y. Pump	Feb. 6, 1877	222	72	11	233
187,154	Same.....Rotary engine	Feb. 6, 1877	223	73	11	233
195,620	Lyman, Azel S., assignor to self and Watts, Parker & Co., New York, N. Y. Sheet-metal can for preserving food	Sept. 25, 1877	887	263	12	549
195,621	Same.....same	Sept. 25, 1877	887	264	12	550
195,622	Same.....Soldering apparatus	Sept. 25, 1877	888	264	12	550
192,925	Lyman, Charles, Clarinda, Iowa. Stove	July 10, 1877	387	115	12	73
192,589	Lyman, Fordyce A. and A. B., Cleveland, Ohio. Gasoline-stove	July 3, 1877	33	10	12	17
	Lyman, John T. (*See* Brennan, Taylor & Lyman.)					
187,290	Lyman, Josiah, Lenox, Mass. Drafting-scales	Feb. 13, 1877	371	119	11	265
196,982	Lyman, William J., East Hampton, Mass., assignor of one-half interest to A. W. Rice, New Haven, Conn. Game apparatus	Nov. 13, 1877	264	78	12	895
191,451	Lynch, Edward P., and E. A. Wright, Davenport, Iowa. Cultivator	May 29, 1877	1368	413	11	959
193,527	Lynch, George B., assignor of one-half interest to H. C. and W. F. Hulet, Darlington, Ind. Corn-planter	July 24, 1877	1011	304	12	173
191,807	Lynd, Andrew, assignor of one-half interest to J. E. Miller, Albany, N. Y. Stove	June 12, 1877	290	90	11	1020
195,830	Lynd, Coleman T., assignor of one-half interest to J. E. Miller, Albany, N. Y. Cooking-stove	Oct. 2, 1877	135	39	12	580
188,525	Lyness, Tobias, and J. P. Dunne, New York, N. Y. Fire-escape	Mar. 20, 1877	577	178	11	473

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Lynn, Benjamin B., *et al.* (*See* Keim, Charles J., assignor.)					
197,280	Lynn, William H., assignor to self and T. Wilcoxon, Freeport, Ill. Car-starter	Nov. 20, 1877	583	173	12	860
195,623	Lyon, Joseph W., assignor, by mesne assignments, to Rand, McNally & Co., Chicago, Ill. Ticket-clasp	Sept. 25, 1877	890	264	12	550
	Lyon, Louis E. (*See* Long & Lyon.)					
193,978	Lyon, Stephen, Chetopah, Kans. Corn-planter	Aug. 7, 1877	180	54	12	258
193,717	Lyon, William, Newark, N. J. Nut-lock	July 31, 1877	1218	365	12	212
195,516	Same.....same	Sept. 25, 1877	793	234	12	536
	Lyons, John. (*See* Kane, Bart, assignor.)					
197,645	Lyons, Michael F., New York, N. Y. Portable derrick	Nov. 27, 1877	972	289	12	926
198,638	Same.....Tessellated or mosaic pavement	Dec. 25, 1877	960	293	12	1110
189,478	Lyons, Patrick, Hartford, Conn. Bell-fastener	Apr. 10, 1877	467	147	11	627
189,760	Lyons, Patrick, assignor of one-half interest to A. J. Benner, Hartford, Conn. Beer-faucet	Apr. 17, 1877	769	236	11	674
192,337	Lysle, George, jr., Pittsburg, Pa. Axle-lubricator for railway-cars	June 26, 1877	878	265	11	1120
	Lytle, Samuel T., jr. (*See* Good, Josias D., assignor.)					
	Lytle, William H. (*See* Crocker & Lytle.)					
198,307	Lyttleton, Patrick, Austin, Nev. Live-stock register	Dec. 18, 1877	628	191	12	1052
193,979	Maas, Albert W. M., assignor of two-thirds interest to E. B. Lott, Mobile, Ala., and W. H. Hardy, Meridian, Miss. Gas-retort	Aug. 7, 1877	181	55	12	259
186,741	Maas, Charles F. W., and W. Schnelke, Milwaukee, Wis. Clothes-sprinkler	Jan. 30, 1877	938	291	11	169
	Maass, John A. (*See* Traut & Maass.)					
194,158	Mabie, George W., Brooklyn, N. Y. Pen-holder	Aug. 14, 1877	397	118	12	293
195,142	Macatear, James, Glasgow, Scotland. Manufacture of granulated chrystalline carbonate of soda	Sept. 11, 1877	399		12	464
195,939	Macaulay, Thomas A., New York, N. Y. Sewing-machine	Oct. 9, 1877	264	74	12	606
	Macbrair, Archibald. (*See* Macbrair, William C., assignor.)					
196,467	Macbrair, Charles C., Cincinnati, Ohio. Glossing labels	Oct. 23, 1877	817	235	12	700
198,642	Macbrair, William C., assignor of two-thirds interest to A. and A. Macbrair, jr., Cincinnati, Ohio. Machine for glossing labels, show-cards, &c.	Dec. 25, 1877	964	294	12	1110
188,386	Macdonald, Franklin, assignor of one-half interest to I. Smith, New York, N. Y. Inking apparatus for printing-presses	Mar. 13, 1877	433	134	11	444
193,169	Macdonald, Manvill M., Syracuse, N. Y. Plaiting-machine	July 17, 1877	631	191	12	114
196,983	Same.....Sponge-cup	Nov. 13, 1877	265	78	12	806
186,354	Macdonald, Ranald, Brooklyn, N. Y. Car-axle lubricator	Jan. 16, 1877	550	167	11	95
189,867	Macdonald, Richard, New Orleans, La. Bleaching and improving cotton-seed oils	Apr. 24, 1877	893		11	699
193,168	Same.....Measuring device for seed-heaters	July 17, 1877	630	191	12	114
192,176	MacDonald, Richard J., New York, N. Y. Fire-escape	June 19, 1877	680	208	11	1083
195,938	MacDonnell, John T. F., Holyoke, Mass. Paper-ruling machine	Oct. 9, 1877	262	73	12	605
187,653	Macfarlan, James S., Mansfield Centre, Conn. Machine for winding and stretching silk thread	Feb. 20, 1877	739	228	11	320
	Machette, E. V. (*See* Reiff, William H., assignor.)					
	Machetts, E. V. (*See* Masac, Theophilus, assignor.)					
193,980	Macht, Carl G., New York, N. Y. Child's carriage	Aug. 7, 1877	182	55	12	259
187,397	Macintosh, John M., Finsbury, and W. Boggett, Chelsea, England. Air-bed	Feb. 13, 1877	478	149	11	279
193,883	Mack, David, Barnesville, assignor of one-half interest to G. Stewart and H. Ebey, Rockville, Kans. Combined seeder and cultivator	Aug. 7, 1877	76	25	12	245
190,504	Mack, Ed. E., and F. Cook, Albany, N. Y.; said Cook assignor to said Mack. Combined collar and toy money box	May 8, 1877	409	119	11	807
	Mack, E. Elisha. (*See* Parker, Homer N., assignor.)					
191,354	Mack, E. Elisha, Albany, N. Y. Paper collar	May 29, 1877	1275	385	11	947
188,923	Mack, James C., Brooklyn, N. Y. Air-cooling apparatus	Mar. 27, 1877	979	300	11	537
191,871	Mack, William B., Boston, Mass. Steam safety-valve	June 12, 1877	352	109	11	1028
7,818	Mackenzie, Philip W., assignor, by mesne assignments, to Montpelier Manufacturing Company, Montpelier, Vt. Velocipede (Reissue)	July 31, 1877	1301	390	12	223
189,367	Mackenzie, Philip W., Blauveltville, assignor to Smith and Sayer Manufacturing Company, New York, N. Y. Furnace for producing heating-gases	Apr. 10, 1877	362	117	11	614
191,808	Mackenzie, Philip W., Blauveltville, N. Y. Apparatus for the manufacture of illuminating-gas	June 12, 1877	291	90	11	1020
193,260	Mackie, John C., Philadelphia, Pa. Burglar-alarm	July 17, 1877	730	223	12	127
188,652	Mackie, John H., Oakland, Cal. Sink and sewer-trap	Mar. 20, 1877	695	214	11	490
197,036	Same.....Sewer-trap	Nov. 13, 1877	319	94	12	814
187,155	Mackie, Samuel J., C. A. Faure, and G. French, Faversham, England. Explosive compound	Feb. 6, 1877	224	73	11	233
195,765	Mackinney, Herbert G., Providence, R. I. Gem-setting	Oct. 2, 1877	72	21	12	571
186,355	Mackintosh, William, New York, N. Y. Underground-telegraph line	Jan. 16, 1877	551	167	11	95
186,356	Same.....same	Jan. 16, 1877	552	168	11	96
187,652	MacLellan, Walter, and J. P. Smith, Glasgow, Scotland. Railway-chair	Feb. 20, 1877	739	228	11	320
	Macneale & Urban. (*See* Urban, Herman, assignor.)					
196,370	Macqueen, Alfred, jr., Philadelphia, Pa. Attachment for filters	Oct. 23, 1877	727	209	12	687
194,449	Macy, Henry, Zurich, Switzerland. Car-brake	Aug. 21, 1877	692	207	12	340
197,038	Macy, Irwin, and J. C. Watkins, Harrisburg, Oreg. Wheel-cultivator	Nov. 13, 1877	320	95	12	814
196,124	Madding, Jasper M., Grand View, Ind. Composition for destroying insects	Oct. 16, 1877	469		12	642
191,934	Maddox, James E. Q., Cincinnati, Ohio. Gate	June 12, 1877	465	143	11	1043
194,607	Maddux, Clawson, Clarksburg, Ohio. Hog-washing machine	Aug. 28, 1877	847	252	12	371
	Mäder, Mathias. (*See* Metz & Mäder.)					
	Madison, Francis M. (*See* Madison, Robert E. and F. M.)					
192,590	Madison, Robert E. and F. M., Corning, Iowa. Hog-cholera compound	July 3, 1877	35		12	17
	Magee Furnace Company. (*See* Magee, John, assignor) (Reissue)					
7,710	Magee, John, Chelsea, assignor to Magee Furnace Company, Boston, Mass. Hot-air furnace (Reissue)	May 29, 1877	1450	436	11	967
192,078	Magee, John, Chelsea, Mass. Sink-trap	June 19, 1877	585	178	11	1071
190,602	Maggi, Charles, Allegheny, assignor of part interest to C. A. Murray and J. Fahey, Pittsburg, Pa. Curling-iron	May 8, 1877	501	149	11	820
	Magill, Robert. (*See* Dunlap & Magill.)					
	Maglone, John. (*See* Hathaway, William A., assignor.)					
196,757	Magner, Thomas J., and C. L. Thomas, Hornellsville, N. Y. Side-spring vehicle	Nov. 6, 1877	22	6	12	763
197,037	Magnus, Paul, New York, N. Y. Water-closet valve	Nov. 13, 1877	319	95	12	814
	Magoon, William H., *et al.* (*See* Jones, John, assignor.)					
195,717	Maguire, James, Mapleton Depot, Pa. Sand-drier	Oct. 2, 1877	29	9	12	564
	Maguire, William H., *et al* (*See* Stockder, Charles E., assignor.)					
189,479	Mahan, Frank M., Saint Joseph, Mo. Combined flour and pastry cupboard and kneading-board	Apr. 10, 1877	468	147, 148	11	627

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
191,694	Mahan, Frank M., Saint Joseph, Mo. Flour bin and sifter combined	June 5, 1877	172	54	11	999
197,646	Maher, George W., Albion, Mich. Machine for relishing rails of sash, doors, and blinds	Nov. 27, 1877	973	289, 290	12	926
186,209	Mahler, Henry, Raleigh, N. C. Advertising-card	Jan. 16, 1877	400	122	11	77
	Mahler, Joseph. (*See* Hirt & Mahler.)					
	Mahoffey, R. H. (*See* Silvester, William, assignor.)					
	Mahon, John., jr. (*See* McGrath, Michael, assignor.)					
190,974	Mahoney, Eugene H., Boston, Mass. Folding-chair	May 22, 1877	904	268	11	888
188,649	Mairs, John C., Steubenville, Ohio. Lamp	Mar. 20, 1877	693	213	11	489
186,941	Maitland, John, Cleveland, Ohio. Road-scraper	Feb. 6, 1877	29	11	11	206
188,526	Maitland, Jones R., Hot Springs, Ark. Combined freight and stock car	Mar. 20, 1877	577	178	11	473
195,379	Major, David R., Huntington, assignor to J. M. Major, Watsontown, Pa. Nut-lock	Sept. 18, 1877	646	192	12	507
	Major, J. M. (*See* Major, David R., assignor.)					
195,624	Major, Joseph L., Manistee, Mich. Hand-stamp for marking logs	Sept. 25, 1877	891	264	12	550
190,603	Major, William, Copenhagen, Denmark. Apparatus for supplying hydrocarbon oil to water under pressure	May 8, 1877	502	149	11	820
	Makepeace, Charles W. (*See* Stewart & Makepeace.)					
7,686	Makepeace, Lysander O., assignor, by mesne assignments, to J. S. Perkins, Worcester, Mass. Boot and shoe crimping machine (Reissue)	May 15, 1877	872	258	11	875
193,415	Malcolm, Julius L., New Athens, Ohio. Hay-elevator	July 24, 1877	901	275	12	158
	Malin, Howard C. (*See* Porterfield & Malin.)					
194,359	Mallalieu, Edward, Baltimore, Md. Paper-lined bag	Aug. 21, 1877	603	180	12	328
187,292	Mallary, George H., Newark, N. J., assignor to G. W. Millar, New York, N. Y. Wood-grinder for paper pulp	Feb. 13, 1877	373	119	11	265
191,605	Mallery, Isaac, Dryden, N. Y. Water-wheel	June 5, 1877	88	26	11	988
189,118	Mallett, Francis W., assignor to A. H. and H. L. Andrews, and T. S. Hayden, Chicago, Ill. Slate	Apr. 3, 1877	94	34	11	571
195,143	Mallette, James, and J. Walmsley, Chicago, Ill. Barrel-cover	Sept. 11, 1877	400	120	12	464
	Mallinson, James. (*See* Dewrance & Mallinson.)					
194,159	Mallon, James, Baton Rouge, assignor of one-half interest to F. Von Phul, New Orleans, La. Car-starter	Aug. 14, 1877	397	118	12	294
188,387	Mallory, Charles A., Ashawa, Canada. Wringer and mangle	Mar. 13, 1877	434	135	11	445
	Mallory, Wheeler & Co. (*See* Brook, John A., assignor)					
	Same (*See* Sparks, William E., assignor) (Reissue.)					
189,368	Malmquist, Neil, Brooklyn, assignor to self and J. Loyd, New York, N. Y. Combined nozzle and sprinkler	Apr. 10, 1877	363	117	11	614
189,048	Malone, Hezekiah P., Cleveland, Ohio. Oil-stove	Apr. 3, 1877	34	12	11	563
	Malone, H. P., *et al.* (*See* Beda, Abia Z., assignor.)					
186,149	Malone, William H., Farmington, Ky. Press for compressing tobacco and other articles	Jan. 9, 1877	241	72	11	49
190,604	Maloney, John, Oneonta, N. Y. Milk-cooler	May 8, 1877	503	149	11	820
186,259	Malphurs, Isham U., Gainesville, Fla. Combination tool	Jan. 16, 1877	443	136	11	83
	Malmstrom, Peter E. (*See* Dummer & Malmstrom.)					
190,055	Maltby, Albert, Pittsburg, Pa. Manufacture of shovel-blanks	Apr. 24, 1877	1094	333	11	725
	Maltby, George E., *et al.* (*See* Jacobson, Christian F., assignor.)					
197,973	Manbeck, David, Des Moines, Iowa. Medical compound	Dec. 11, 1877	276		12	994
187,881	Manbré, Alexandre, Penge, England. Apparatus and process for manufacturing purified saccharine solutions	Feb. 27, 1877	979	304	11	361
186,427	Mance, Henry C., Kurrachee, Bombay, assignor of one-half interest to S. Goode, London, England. Apparatus for signaling by means of reflected light	Jan. 23, 1877	638	194, 195	11	119
196,230	Mancel, Charles, New York, N. Y. Apparatus for illustrating the earth's axial rotation	Oct. 16, 1877	582	168	12	658
	Mancourt, John W. (*See* Doremus, Willard D., assignor.)					
194,160	Mandt, Targe G., Stoughton, Wis. Wagon running-gear and brake	Aug. 14, 1877	398	118, 119	12	294
	Manes, Ephraim. (*See* Whitman & Manes.)					
	Manger, Julius W. (*See* Seifert & Manger.)					
193,981	Mangold, Leonard, Chattanooga, Tenn. Oscillating valve for steam-engines	Aug. 7, 1877	183	55	12	259
197,042	Mangold, Samuel, New York, N. Y. Burglar-alarm	Nov. 13, 1877	324	96	12	815
	Manhattan Brass Company. (*See* White, James H., assignor.)					
	Manheim, Jacob. (*See* Anthony & Manheim.)					
196,097	Manker, Jenkins, Clay City, Ill. Gate	Oct. 16, 1877	435	127	12	638
	Manley, Daniel B. (*See* Wheeler & Manley) (Reissue.)					
188,020	Manley, Emmons, assignor of three-fourths interest to W. W. Runyan, Marion, N. Y. Wind and water wheel	Mar. 6, 1877	61	18	11	388
190,345	Mann, Benjamin B., Hiawatha, Kans. Cage for restraining cows while being milked	May 1, 1877	226	67	11	776
188,924	Mann, Charles J., Buffalo, N. Y. Unloading grain-vessels	Mar. 27, 1877	980	360	11	537
	Mann, Elbridge. (*See* Howard, Alonzo J. F., assignor.)					
192,442	Mann, Ira O., and G. R. Rankin, Lake City, Colo. Metallic counter or stiffener for boots and shoes	June 26, 1877	978	294	11	1134
188,158	Mann, James D., Bathurst, Canada. Snow-plow	Mar. 6, 1877	191	58	11	403
191,767	Mann, Loomis, Ionia, Mich. Apparatus for carbureting air	June 12, 1877	250	79	11	1015
189,049	Mann, William, and S. Owens, London, England. Valve	Apr. 3, 1877	35	12	11	563
187,025	Manning, Edward B., New Haven, Conn. Attaching handles to glazed metal goods	Feb. 6, 1877	106	36	11	217
189,762	Manning, Edward B., New Haven, Conn. Tea and coffee pot	Apr. 17, 1877	771	236	11	674
	Manning, James. (*See* Haas & Manning.)					
189,944	Manning, John W., Cambria, N. Y. Copy-book	Apr. 24, 1877	966	296	11	709
197,152	Manning, Joseph, assignor to R. W. Manning, New York, N. Y. Pulley-block	Nov. 13, 1877	439	129	12	832
	Manning, Richard W. (*See* Manning, Joseph, assignor.)					
190,772	Mansir, Job, Richmond, Me. Cut-off or valve for pumps	May 15, 1877	695	205	11	852
193,011	Mansur, John S., Brownsville, Tex. Billiard-cushion	July 10, 1877	466	141	12	84
191,452	Mantell, James, assignor to self and C. B. Palmer, Detroit, Mich. Station-indicator	May 29, 1877	1370	413	11	959
188,925	Manton, Frank S., Providence, R. I. Windlass	Mar. 27, 1877	981	301	11	537
197,039	Same same	Nov. 13, 1877	322	95	12	814
197,040	Same Windlass-bitt	Nov. 13, 1877	323	95	12	814
197,041	Same Deck-pipe for windlasses	Nov. 13, 1877	323	96	12	814
8,001	Manton, Joseph P., and G. H. Remington, Providence, R. I., assignors to American Ship Windlass Company. Power capstan (Reissue)	Dec. 18, 1877	766	231, 232	12	1073
197,874	Manton, Joseph P., Providence, R. I. Steering-gear for vessels	Dec. 4, 1877	167	51	12	970
191,063	Manuel, David, Readville, and W. Whitehouse, Boston, Mass. Combined handle and sheath for pocket-knife blades	May 22, 1877	991	294	11	899
	Manville, Charles M., *et al.* (*See* Johnson, John W., assignor.)					
198,643	Manville, Marcus M., and C. A. Bissett, Whitehall, N. Y. Hose-coupling	Dec. 25, 1877	966	295	12	1110

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Manwaring, Sidney A. (*See* Holmes, Horace H., assignor.)					
	Maples, Cassius. (*See* Wood & Maples.)					
186,143	Mar, Helen, Boston, Mass. Combined wash-stand and bureau	Jan. 9, 1877	326	99, 100	11	60
191,008	Marable, Thomas E., assignor of one-half interest to J. C. Blake, Petersburg, Va. Straw-cutter	May 22, 1877	941	278	11	892
188,926	Marble, Ezra W., Wilkinsville, Mass. Loom-shuttle	Mar. 27, 1877	982	301	11	537
198,645	Marçais, Joseph J., Paris, France. Apparatus for raising water, &c	Dec. 25, 1877	967	295	12	1111
	March, Brownback & Co. (*See* Brownback & Towers, assignors.)					
	March, George N., *et al.* (*See* Knapp, A. Hayden, assignor.)					
198,034	March, Thomas J., Station, Pa. Stove	Dec. 11, 1877	329	102	12	1003
192,835	Marchand Charles, Cleveland, Ohio. Hot-air furnace	July 10, 1877	307	90	12	62
187,156	Marchand, Henry E., Allegheny, Pa. Steam-engine	Feb. 6, 1877	225	73, 74	11	233
187,157	Same.....Balance-valve	Feb. 6, 1877	226	74	11	233
195,452	Marcotte, Charles, Saint Louis, Mo. Fire-proof joint for buildings	Sept. 25, 1877	731	216	12	527
196,813	Marcotte, Henry, United States Army. Paddle-wheel	Nov. 6, 1877	76	23	12	771
198,131	Marcy, Merrick D., assignor of one-half interest to F. F. Bullard, Worcester, Mass. Lamp-shade	Dec. 11, 1877	430	134	12	1017
	Marden, George A., *et al.* (*See* Braddock, Edward I., assignor.)					
198,132	Marden, Jeremiah A., Boston, Mass. Mariner's compass	Dec. 11, 1877	431	134	12	1017
196,240	Marden, Samuel, assignor of one-half interest to C. W. Lord, Newton, Mass. Vibrating-propeller	Oct. 16, 1877	583	168	12	658
190,056	Marcan, William, Galveston, Tex. Car brake and starter	Apr. 24, 1877	1094	333	11	725
194,450	Same.....same	Aug. 21, 1877	694	207	12	340
186,260	Margarit, Joseph B., New York, N. Y. Composition for destroying insects	Jan. 16, 1877	444		11	83
185,944	Maris, Thomas C., assignor of one-half interest to S. M. Hart, Marietta, Ohio. Harness breast collar	Jan. 2, 1877	135	40	11	26
190,057	Maris, Thomas C., and S. M. Hart, Marietta, Ohio. Peg float or cutter	Apr. 24, 1877	1095	334	11	725
193,376	Mark, Daniel G., Evansville, Ind. Tray for lamps	July 24, 1877	865	265	12	153
189,119	Mark, Julius, Herkimer, N. Y. Skirt	Apr. 3, 1877	94	34	11	572
189,480	Markhan, William B., Bethel, assignor of one-half interest to F. Duckett, Chapin, Ill. Fence-post	Apr. 10, 1877	469	148	11	627, 628
	Marks, Anron, *et al.* (*See* Mattoni, Charles, jr., assignor.)					
197,875	Marks, Andrew J., Beaver, Pa. Fence	Dec. 4, 1877	168	51	12	970
185,938	Marks, George, Ackley, Iowa. Leather-punching machine	Jan. 2, 1877	120	39	11	25
7,807	Marks, Marcus, New York, N. Y. Cap.....(Reissue)	July 24, 1877	1078	322	12	181
7,808	Same.....same.....(Reissue)	July 24, 1877	1079	322	12	181
186,428	Marlatt, Hezekiah R., and A. W. Wright, Winchester, Ind. Vehicle-top support	Jan. 23, 1877	640	196	11	120
187,158	Marmet, Florence, Cincinnati, Ohio. Elevator and conveyor for coke-crushers	Feb. 6, 1877	227	74	11	234
	Marot, John R. (*See* Hogeland, Israel, assignor.)					
	Marquardt, Georg W. (*See* Hoberling, John, assignor.)					
188,527	Marquart, Frederick, Cleveland, Ohio. Gasoline-burner	Mar. 20, 1877	578	178	11	473
188,390	Marquis, Francis W., West Middleburg, Ohio. Device for sharpening plow shares and points	Mar. 13, 1877	437	136	11	445
	Marquis, John, *et al.* (*See* Cummings, Samuel M., assignor.)					
7,679	Marquis, John, San Francisco, Cal. Slop-hopper.....(Reissue)	May 15, 1877	864	256	11	875
188,391	Marquis, Joseph E., Sharon, Ohio. Reciprocating churn	Mar. 13, 1877	438	136	11	445
191,007	Marschall, August, New York, N. Y. Adjustable guard for screw-propellers	May 22, 1877	940	278	11	892
187,414	Marsden, Henry R., deceased, A. Pollock, Washington, D. C., administrator and assignor to W. G. Dalton, Leeds, England. Stone and ore crusher	Feb. 13, 1877	494	153	11	280, 281
	Marsden, John H. (*See* Marsden, William W., assignor.)					
187,878	Marsden, John, Liverpool, England. Billiard-table	Feb. 27, 1877	978	303	11	360
191,355	Marsden, John, Chester, Pa. Car-starter	May 29, 1877	1276	385	11	947
192,872	Marsden, Samuel, Saint Louis, Mo. Portable apparatus for loading vessels and moving heavy articles	July 10, 1877	341	100	12	66
195,033	Same.....Hydraulic engine	Sept. 11, 1877	287	87	12	447
198,402	Marsden, William W., assignor of one-half interest to J. H. Marsden, Baltimore, Md. Hose-coupling	Dec. 18, 1877	717	218	12	1065
	Marsh, Charles E., *et al.* (*See* Stieneker, Rudolph W., assignor.)					
197,876	Marsh, Charles E., Indianapolis, Ind. Signal for freight-trains	Dec. 4, 1877	169	51	12	970
194,699	Marsh, Charles O., Ashland, Ohio. Spring bed-bottom	Aug. 28, 1877	932	277	12	383
	Marsh, Charles W., *et al.* (*See* Dafoe, William Z., assignor.)					
187,543	Marsh, Charles W. and W. W., Sycamore, Ill. Harvester-reel	Feb. 20, 1877	632	196, 197	11	306
186,429	Marsh, Edwin T., Rochester, N. Y. Letter-box	Jan. 23, 1877	641	196	11	120
194,698	Marsh, Elon A., assignor of one-half interest to B. A. Neisser, Battle Creek, Mich. Music support	Aug. 28, 1877	931	277	12	383
193,528	Marsh, James P., Chicago, Ill. Exercising-machine	July 24, 1877	1012	305	12	173
7,870	Marsh, James S., Lewisburg, Pa. Harvester.....(Reissue)	Sept. 4, 1877	197	60, 61	12	427
194,700	Same.....Corn-shelling machine	Aug. 28, 1877	933	277, 278	12	383
191,064	Marsh, Riverius, Flushing, N. Y. Adjustable chandelier	May 22, 1877	992	295	11	899
196,241	Marsh, Timothy D., assignor of one-half interest to F. M. Crane, Jersey, Ohio. Lawn-mower	Oct. 16, 1877	585	169	12	659
189,566	Marsh, V., Charles W. and W. W., Sycamore, Ill. Harvester-reel	Apr. 17, 1877	572	178	11	650
189,369	Marsh, William S., New Gloucester, Me. Horse-protector	Apr. 10, 1877	364	117	11	614
197,941	Same.....Rein-holder	Dec. 11, 1877	241	74	12	989
	Marsh, William W., *et al.* (*See* Dafoe, William Z., assignor.)					
	Marsh, William W. (*See* Marsh, Charles W. and W. W.)					
194,098	Marshall, Arthur, San Francisco, Cal. Draft-tip for vehicle	Aug. 14, 1877	317	94	12	284
195,766	Marshall, Charles E., assignor to B. H. Hill, Boston, Mass. Anchor	Oct. 2, 1877	72	22	12	571
192,522	Marshall, Charles K., Vicksburg, Miss. Envelope	June 26, 1877	1059	319	11	1144
193,012	Marshall, Charles K., Vicksburg, Miss., assignor of one-fourth interest to N. H. Harris Postal card	July 10, 1877	466	141	12	84
192,177	Marshall, Edwin L., Cleveland, Ohio. Book-support	June 19, 1877	680	208	11	1083
	Marshall, George. (*See* Bailey & Marshall.)					
193,261	Marshall, George E, Turner's Falls, Mass. Preparing wood for mechanical reduction to paper-pulp	July 17, 1877	731		12	127
197,044	Marshall, James M., Knoxville, Tenn. Furnace-door for steam-engines, locomotives, &c	Nov. 13, 1877	327	97	12	815
186,357	Marshall, John B., assignor of one-half interest to J. B. McPherson, Barnesville, Ohio. Curtain-fixture	Jan. 16, 1877	553	168	11	96
188,299	Marshall, John E., Buffalo, N. Y. Envelope	Mar. 13, 1877	341	107	11	432
198,401	Marshall, John E., Kalamazoo County, Mich. Harrow	Dec. 18, 1877	716	218	12	1065

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
185,830	Marshall, Joseph C., Springfield, Mass. Square	Jan. 2, 1877	18	6	11	11
196,916	Marshall, Joshua H., assignor to self and H. Webster, Rondout, N. Y. Condition-powders for horses and cattle	Nov. 6, 1877	189		12	786
196,302	Marshall, Nathaniel, Plattsburg, N. Y., assignor to S. M. Weed. Double-action pump.	Oct. 23, 1877	660	191	12	678
	Marshall, S. Brown. (*See* Marshall, Thomas P. and S. B.)					
194,305	Marshall, Thomas P. and S. B., Trenton, N. J., assignors to S. B. Marshall. Book-marker	Aug. 21, 1877	548	165	12	321
194,306	Same.....Pencil-holder	Aug. 21, 1877	549	165	12	321
7,742	Marshall, William C., New York, N. Y. Treating and drying animal matter. (Reissue)	June 12, 1877	548	167	11	1053
193,885	Marshall, William L., United States Army. Automatic canal-lock	Aug. 7, 1877	79	25, 26, 27	12	246
194,922	Same same	Sept. 4, 1877	164	51	12	423
196,686	Same.....Canal-lock gate	Oct. 30, 1877	1051	305	12	743
192,338	Marshall, William M., Philadelphia, Pa. Exercising machine	June 26, 1877	878	265	11	1120
	Marshall, William S. (*See* Warwick & Marshall.)					
194,255	Marshman, Gideon, Lynn, Mass. Shutter and blind fastener	Aug. 14, 1877	482	145	12	306
186,014	Marsland, Edward, Sing Sing, N. Y. Liquid-meter	Jan. 9, 1877	206	62	11	44
191,885	Marsters, Enoch J., Stockton, Cal. Feeder for thrashing-machines	June 12, 1877	466	143	11	1643
186,742	Marston, Dudley J., Amesbury, Mass. Gang-saw mill	Jan. 30, 1877	938	291	11	169
187,027	Marston, Thomas P., assignor to P. Hake, New York, N. Y. Tag-fastener	Feb. 8, 1877	108	36	11	217
188,300	Martin, Albert D., assignor of one-half interest to A. H. Case, Eden, N. Y. Road-engine	Mar. 13, 1877	342	107, 108	11	432
190,152	Martin, Alexander C., Hamilton, Ohio. Furniture-caster	May 1, 1877	42	12	11	752
194,701	Martin, Alfred, Wilmington, N. C. Manufacturing of brewers' pitch	Aug. 28, 1877	934		12	383
194,307	Martin, Andrew J., assignor to P. P. Mast & Co., Springfield, Ohio. Peripheral force-feed for grain-drills	Aug. 21, 1877	549	165	12	321
195,144	Same.....Grain-drill	Sept. 11, 1877	400	120	12	464
198,495	Martin, Andrew J., Springfield, Ohio. Force-feed for grain drills and seeders	Dec. 25, 1877	825	250	12	1087
196,814	Martin, Ara T., jr., assignor to self, M. F. Potter, and J. Brotherton, Waverly, Iowa. Umbrella-holder	Nov. 6, 1877	77	23	12	772
185,863	Martin, Arba, Big Rapids, Mich. Saw-filing machine	Jan. 2, 1877	48	15	11	15
187,979	Austin E., Beverly, Mass. Tree-protector	Mar. 6, 1877	23	6	11	384
188,388	Martin, Benjamin G., New York, N. Y. Elevator	Mar. 13, 1877	435	135	11	445
188,389	Same.....Car-axle lubricator	Mar. 13, 1877	436	135	11	445
196,532	Martin, Charles E., Chicago, Ill. Educational appliance	Oct. 30, 1877	905	262	12	723
191,872	Martin, Charles M., New York, N. Y. Extinguishing fires	June 12, 1877	353	109	11	1028
191,161	Martin, David, Brookston, Ind. Horse hay-rake	May 22, 1877	1080	323	11	911
190,346	Martin, Edwin A., Licking County, Ohio. Sack-scales	May 1, 1877	227	68	11	776
193,768	Martin, Edwin A., Thornville, Ohio. Grain-sacking scales	July 31, 1877	1269	381	12	219
187,026	Martin, Emory O., Greece City, Pa. Gas-regulator	Feb. 6, 1877	107	36	11	217
187,398	Martin, Ezekiel, Memphis, Mo. Corn-harrow	Feb. 13, 1877	478	149	11	279
190,230	Martin, Francis M., assignor to self and J. A. Hart, Cambridge, Ill. Hair-spring-stud for watches	May 1, 1877	114	33	11	761
	Martin, Frederick J. (*See* Reyburn & Martin.)					
189,637	Martin, George A., Myerstown, Pa. Machine for twisting whip-lashes	Apr. 17, 1877	639	198	11	658
190,882	Martin, George W., Chelsea, Mass. Combined lamp, chimney, shade, and globe	May 15, 1877	791	235	11	865
193,013	Same.....Lens attachment for lamp-chimneys	July 10, 1877	467	142	12	85
195,940	Martin, George W., Port Hudson, La. Connecting-link for whiffletrees, &c	Oct. 9, 1877	265	74	12	606
197,153	Martin, George W., Chelsea, Mass. Lamp-chimney	Nov. 13, 1877	440	129	12	832
192,521	Martin, Jacob, Tiffin, Ohio. Cook-stove door	June 26, 1877	1058	318	11	1144
197,647	Martin, James, Goliad, Tex. Tire-tightener	Nov. 27, 1877	974	290	12	926
	Martin, James B. (*See* Williams, Robert S., assignor.)					
188,252	Martin, John M. H., Brookhaven, Miss. Bale-tie	Mar. 13, 1877	296	93	11	426
187,877	Martin, John P., Xenia, Ohio. Feed-cooker	Feb. 27, 1877	977	303	11	360
	Martin, John S., *et al.* (*See* Cliff, James, assignor.)					
191,986	Martin, John W., assignor of one-half interest to G. Burgert, Alliance, Ohio. Dough-raiser	June 12, 1877	467	144	11	1043
193,884	Martin, Jules, assignor to Societe Douphinot Martin et Desquibbet, Reims, France, Spinning mule and jack	Aug. 7, 1877	77	25	12	245
136,684	Martin, Louis, Lyons, N. Y. Machine for exterminating noxious grasses	Jan. 30, 1877	884	274	11	162
	Martin, Louis P. (*See* Hock & Martin.)					
197,043	Martin, Moritz, Bitterfield, Prussia. Barley-peeling mill	Nov. 13, 1877	325	96	12	815
196,030	Martin, Peter, Newark, N. J. Trunk-fastener	Oct. 9, 1877	355	101	12	619
	Martin, Philip B. (*See* Converse, Boliver C., assignor.)					
195,032	Martin, Pierre B., Bordeaux, France. Rotary engine	Sept. 11, 1877	285	87	12	447
188,475	Martin, Rosa, Portland, Oreg. Stove for heating sad-irons	Mar. 20, 1877	531	163	11	467
196,242	Martin, Samuel B., San Francisco, Cal. Device for releasing animals from stalls	Oct. 16, 1877	586	169	12	659
190,059	Martin, Samuel W., assignor of one-half interest to P. P. Mast, Springfield, Ohio. Screw-cutting die	Apr. 24, 1877	1097	334	11	725
196,098	Martin, William, Pittsburg, Pa. Machine for manufacturing parchment-paper	Oct. 16, 1877	436	127	12	638
	Martin, William N. (*See* Phillips, Ambrose A., assignor.)					
190,058	Marvil, Joshua H., Laurel, Del. Watchman's time-detecter	Apr. 24, 1877	1096	334	11	725
190,883	Same.....Fruit-crate	May 15, 1877	792	235	11	865
	Marville, Louis J. C. (*See* Lacomme, Marville & Giren.)					
188,528	Marvin, George P., New Haven, Conn. Shirt	Mar. 20, 1877	579	179	11	473
198,130	Marvin, Harvey S., assignor to self and F. E. Wakeman, Nunda Station, N. Y. Side-spring wagon	Dec. 11, 1877	429	134	12	1017
	Marvine, George E. (*See* Johnson, William H., assignor.)					
193,886	Marx, Felix, and J. N. Blasi, New York, N. Y. Automatic fan	Aug. 7, 1877	85	27	12	246
187,879	Masac, Theophilus, Philadelphia, Pa. Fastening for gloves, &c	Feb. 27, 1877	978	304	11	360
189,763	Masac, Theophilus, assignor of one-half interest to E. V. Machetts, jr., agent, Philadelphia, Pa. Thread-cutter	Apr. 17, 1877	772	237	11	675
	Mason & Hamlin Organ Company. (*See* Hobard, Albert K., assignor.)					
	Same.....(*See* Matthews, Mason J., assignor.)					
	Mason, A. C. (*See* Dempster, Hiram V., assignor.)					
191,695	Mason, Albert C., Galesburg, Ill., assignor to self, W. O. Douglass, and J. Gilham, Washington, D. C. Case for storing and protecting ribbon	June 5, 1877	174	54	11	1000
198,644	Mason, Arnold C., assignor of one-half interest to H. Dean, Olean, N. Y. Check-rein for harness	Dec. 25, 1877	967	295	12	1110
187,159	Mason, Benajah, jr., and E. J. Smith, North English, Iowa. Sash-holder	Feb. 6, 1877	228	74	11	234
	Mason, Benjamin F. (*See* Gosnell, Alexander, assignor.)					
	Mason, Charles E. (*See* Babcock & Mason.)					
186,144	Mason, Christopher C., and J. F. Bracket, Mount Pulaski, Ill., assignors to selves and P. Baldwin. Force-pump	Jan. 9, 1877	327	100	11	60

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Mason, C. C. (*See* Johnson & Bracket, assignors.)					
195,380	Mason, Edward T., Chicago, Ill. Shipping-can shield	Sept. 18, 1877	647	192	12	567
	Mason, George L., *et al.* (*See* Pitts, George, assignor.)					
	Mason, Henry B. (*See* Robertson, Adam, assignor.)					
191,904	Mason, Hiram, Nelsonville, Ohio. Hame	June 12, 1877	382	118	11	1032
	Mason, Horatio H. (*See* Emerson, Richard, assignor.)					
	Same.....same.....(Reissue.)					
191,162	Mason, Isaac, Brooklyn, N. Y. Borean-drawers	May 22, 1877	1081	324	11	912
191,453	Mason, James, New Haven, Conn. Securing and adjusting eccentrics	May 29, 1877	1370	413	11	959
	Mason, John L., *et al.* (*See* Pitts, George, assignor.)					
189,316	Mason, John L., New Brunswick, N. J. Fruit-jar	Apr. 10, 1877	318	100	11	608
194,876	Mason, Lewis T., Ellington, N. Y. Gate	Sept. 4, 1877	118	37	12	417
	Mason, Lyman S. (*See* Allen & Mason.)					
	Mason, Peter. (*See* Kline & Mason.)					
195,145	Mason, Sylvester G., Crown Point, N. Y. Vehicle-hub	Sept. 11, 1877	402	121	12	464
187,880	Mason, Thomas, assignor to D. W. Bruce, New York, N. Y. Type-mold	Feb. 27, 1877	979	304	11	361
197,940	Mason, William, Taunton, Mass. Locomotive-truck	Dec. 11, 1877	240		12	989
189,945	Mason, William H., Plantsville, Conn. Lamp-chimney	Apr. 24, 1877	969	296	11	709
194,833	Massey, Milton M., Macon, Ga. Feeding attachment for cotton-gins	Sept. 4, 1877	77	25	12	411
	Mast & Co., P. P. (*See* Gardiner, Charles O., assignor.)					
	Same.....(*See* Martin, Andrew J., assignor.)					
	Same.....(*See* Winchell, James F., assignor).....(Reissue.)					
	Mast, Phineas P. (*See* Martin, Samuel W., assignor.)					
	Mast, P. P., *et al.* (*See* Kelly, John R., assignor.)					
186,145	Masterton, Walter, Stockton, Cal. Incubator	Jan. 9, 1877	328	100	11	60
190,347	Masury, John W., New York, N. Y. Can	May 1, 1877	228	68	11	776
196,533	Same.....Paint-mixer	Oct. 30, 1877	966	262	12	723
198,133	Matchett, Alexander, Allegheny, Pa. Fire-kindler	Dec. 11, 1877	432	135	12	1017
196,687	Mateer, John B., Shippensburg, Pa. Car-coupling	Oct. 30, 1877	1053	305	12	744
	Mather, Edmund. (*See* Blizzard & Mather.)					
187,399	Mather, Samuel W., Cleveland, Ohio. Fire-kindler	Feb. 13, 1877	479	149	11	279
189,371	Mather, William, Salford, England. Apparatus for steaming and aging printed fabrics	Apr. 10, 1877	365	118	11	614
197,483	Mathers, George C., Louisville, Ky. Frame for mosquito-nets	Nov. 27, 1877	801	239	12	902
191,768	Matheson, George, McKeesport, Pa. Union and joint for tubing	June 12, 1877	251	79	11	1015
191,769	Same.....Pipe-joint	June 12, 1877	251	79	11	1015
191,770	Same.....same	June 12, 1877	252	79	11	1015
198,035	Same.....Tubing	Dec. 11, 1877	331		12	1003
	Matheson, John, *et al.* (*See* Krans, Herman T. C., assignor.)					
8,012	Mathews, David P., Winthrop, Mass., assignor, by mesne assignments, to E. C. Bates. Tree-protector.....(Reissue)	Dec. 25, 1877	1064	324	12	1124
189,567	Mathews, Eliezer R., Youngstown, Ohio. Pipe-wrench	Apr. 17, 1877	574	178	11	650
188,301	Mathews, Francis, New Orleans, La. Steam-boiler	Mar. 13, 1877	343	108	11	432
194,452	Mathews, Francis V., New Orleans, La. Street-car engine	Aug. 21, 1877	696	207	12	341
193,262	Mathews, George W., Ickesburg, Pa. Car-coupling	July 17, 1877	732	223	12	127
197,974	Mathews, William C., Shenandoah, Iowa. Weather-strip	Dec. 11, 1877	277	84	12	994
188,392	Mathewson, Edwin W., assignor to F. Armstrong, Bridgeport, Conn. Lathe-chuck	Mar. 13, 1877	439	136	11	445
190,688	Mathewson, Syria W., Narragansett Pier, R. I. Culinary dish	May 15, 1877	612	182	11	841
	Mathias, David H., *et al.* (*See* Thorne, Sylvester L., assignor.)					
189,050	Mathias, Martin L., Hilliard, Ohio. Car-coupling	Apr. 3, 1877	36	13	11	564
189,370	Mathieson, James W., Brooklyn, N. Y. Valve for steam-pumps	Apr. 10, 1877	365	117	11	614
	Mathison, Thomas, *et al.* (*See* Ritty, Sebastian, assignor.)					
193,529	Matlock, John W., Brooklyn, assignor to J. J. Smith and J. L. Wise, New York, N. Y. Valve for steam-radiators	July 24, 1877	1012	305	12	173
192,774	Matteson, Elias L., Randolph, N. Y. Heating-stove	July 3, 1877	215	62	12	41
197,558	Matteson, Elisha, Norwich, Conn. Folding stool	Nov. 27, 1877	883	263	12	913
	Matthewman, John. (*See* Johnson, Albert W., assignor.)					
187,160	Matthews, Elbridge G., Oakham, Mass. Plow	Feb. 6, 1877	228	75	11	234
	Matthews, Henry A. (*See* Hendey, George E., assignor.)					
191,540	Matthews, James T., New Berne, N. C. Bit-stock	June 5, 1877	33	10	11	980
189,764	Matthews, John, New York, N. Y. Flavoring aerated beverages	Apr. 17, 1877	772		11	675
198,403	Same.....Apparatus for carbonating beverages	Dec. 18, 1877	718	218	12	1065
196,984	Matthews, Mason J., assignor to Mason & Hamlin Organ Company, Boston, Mass. Reed-organ	Nov. 13, 1877	266	78	12	806
	Matthiessen & Wiecher's Sugar Refining Company, F. O. (*See* Krause, Otto H., assignor.)					
	Same.....(*See* Quimby, Edward E., assignor.)					
188,927	Matthiessen, Conrad H., Odell, Ill. Center-draft side thill	Mar. 27, 1877	983	301	11	537
	Matthiessen, Franz O., trustee. (*See* Day, Elias T., assignor.)					
	Matthiessen, Franz O., *et al.* (*See* Elmenhorst, Walter R., assignor.)					
	Matthiessen, Franz O. (*See* Goubert, Auguste A., assignor.)					
191,163	Matthiessen, Franz O., Irvington, N. Y. Apparatus for collecting and saving particles of sugar-liquor rising with the steam from vacuum-pans	May 22, 1877	1082	374	11	912
191,537	Matthiessen, Franz O., Irvington, and A. A. Goubert, New York, N. Y., assignors to said Matthiessen. Device for collecting and saving the particles of sugar rising with the steam from vacuum-pans	June 5, 1877	31	9	11	980
191,538	Same.....Device for collecting the sugar-liquor which boils over from vacuum-pans	June 5, 1877	32	9	11	980
191,539	Matthiessen, Franz O., Irvington, N. Y. Washing raw sugar	June 5, 1877	33		11	980
	Matthiessen, Frederick W. (*See* Hegeler & Matthiessen.)					
197,281	Mattoni, Charles, jr., assignor to self and G. O. Crandall, Belmont, and A. Marks, Hornellsville, N. Y. Spark-arrester	Nov. 20, 1877	584	173	12	861
194,451	Mattson, Francis B., assignor of one-half interest to M. P. Whiteside, Rockford, Ill. Machine for cutting escutcheons and other ornaments upon furniture	Aug. 21, 1877	695	207	12	341
7,971	Mattson, Morris, New York, N. Y. Flexible syringe.....(Reissue)	Nov. 27, 1877	1061	318	12	938
191,356	Same.....Clamp for tubing	May 29, 1877	1277	385	11	947
191,357	Same.....Tube-holder for syringes	May 29, 1877	1277	385	11	947
	Mattson, W. Harry. (*See* Stewart, Arthur, assignor.)					
	Mauger, Victor E. (*See* Blake, William, assignor.)					
189,568	Maull, Joseph P., Saint Louis, Mo. Potato-digger	Apr. 17, 1877	575	178	11	650
190,884	Maurel, Sebastien J., and C. L. Truel, Marseilles, France. Safety-valve	May 15, 1877	794	235	11	866
191,696	Maurice, Charles C., New York, N. Y. Lithographic-printing press	June 5, 1877	175	54, 55	11	1000
196,466	Same.....Producing paper printing surfaces	Oct. 23, 1877	815	234	12	700

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
187,161	Maury, Matthew F., Charlottesville, Va., assignor to Washburn & Moen Manufacturing Company, Worcester, Mass. Bale-tie	Feb. 6,1877	229	75	11	234
192,178	Maux, Edward, New York, N. Y. Picture-frame	June 19,1877	681	269	11	1083
189,243	Mawson, John, Philadelphia, Pa. Bobbin	Apr. 3,1877	213	72	11	587
8,015	Maxfield, Charles P., Fairhaven, assignor to E. T. Covell, New Bedford, Mass. Metallic can or vessel (Reissue)	Dec. 25,1877	1069	324	12	1125
196,758	Same same	Nov. 6,1877	23	6	12	764
193,982	Maxon, Thomas, Springfield, Ohio. Clamp for hoisting monuments, pillars, &c	Aug. 7,1877	184	55	12	259
196,985	Maxson, John, assignor to self, M. Maxson, and W. D. Hunt, Scott, N. Y. Razor-strop	Nov. 13,1877	268	79	12	806
	Maxson, Morgan, *et al.* (*See* Maxson, John, assignor.)					
	Maxwell, Calvin L. (*See* Johnston, William K., assignor.)					
186,261	Maxwell, David, Paris, Canada. Straw-cutter	Jan. 16,1877	444	136, 137	11	83
187,400	Maxwell, David N., assignor of one-half interest to G. W. Jones, Ames, Iowa. Ditching-plow	Feb. 13,1877	480	150	11	279
193,014	Maxwell, John, Rochester, N. Y. Burial-casket	July 10,1877	469	142	12	85
189,372	Maxwell, John L., Bentonville, Ark. Churn-dasher	Apr. 10,1877	306	118	11	614
192,122	Maxwell, Samuel F., Clifton, W. Va. Machine for crozing, chamfering, and equalizing staves	June 19,1877	627	191	11	1076
	May, Charles. (*See* Seidler, George N., assignor.)					
192,123	May, Edward S., Campbelltown, N. Y. Smoking-pipe	June 19,1877	628	191	11	1076
196,468	Same Lighting device for cigars, &c	Oct. 23,1877	817	235	12	700
	May, John A. (*See* Sturdy & May.)					
189,244	May, William D., Baltimore, Md. Attaching knobs to spindles	Apr. 3,1877	213	72	11	587
190,348	Same Car-screen	May 1,1877	229	68	11	776
7,786	Mayall, Thomas J., Reading, Mass., assignor, by mesne assignments, to F. B. Williams. Apparatus for delivering sheets from printing-presses (Reissue)	July 3,1877	278	82	12	49
187,544	Maybach, William H., Buffalo, N. Y. Carpet-stretcher	Feb. 20,1877	633	197	11	366
186,588	Maydole, David, assignor of one-fourth interest to C. H. Merritt, Norwich, N. Y. Manufacture of hammers	Jan. 23,1877	791	243, 244	11	140
186,590	Maydole, David, Norwich, N. Y. Die for forging hammers	Jan. 23,1877	794	244	11	140
196,917	Same Die for forging adze-eye tool	Nov. 6,1877	190	55	12	786
195,297	Mayer, Isaac, New York, N. Y. Purifying raw animal fats	Sept. 18,1877	572		12	496
186,210	Mayer, Joseph, Brooklyn, N. Y., assignor to Waterman & Mayer, New York, N. Y. Corset	Jan. 16,1877	401	123	11	77
194,702	Mayerhofer, Josef, Kahlenbergerdorf, Austria, assignor to L. Fleischmann, New York, N. Y. Apparatus for preparing coffee	Aug. 28,1877	935	278	12	383
	Mayers, George. (*See* Hahn & Mayers.)					
	Mayfield, James, *et al.* (*See* Henry, Benjamin F., assignor.)					
193,170	Mayfield, Washington B., Seneca, Mo. Corn-harvester	July 17,1877	632	191	12	114
196,031	Mayfield, William D, Fort Worth, Tex. Pump-bucket	Oct. 9,1877	356	101	12	619
	Maynadier, James E. (*See* Ashton & Maynadier.)					
187,654	Maynadier, James E., Boston, Mass., assignor to H. W. Collender, Now York, N. Y. Billiard-table cushion	Feb. 20,1877	740	229	11	320
187,655	Same same	Feb. 20,1877	741	229	11	320
187,656	Same same	Feb. 20,1877	741	229	11	320
185,831	Maynard, John W., Chicago, Ill. Tobacco-safe	Jan. 2,1877	18	6	11	11
186,860	Maynard, William, Philadelphia, Pa. Apparatus for the hydration of chlorine gas	Jan. 30,1877	1065	329	11	185
187,882	Maynard, William, New York, N. Y. Softening, decolorizing, and cleansing animal and vegetable fiber	Feb. 27,1877	983		11	361
198,646	Maynz, Edward, Boston, Mass. Lacing-hook	Dec. 25,1877	970	295	12	1111
194,703	Mayo, Frederick H. and W. H., Jackson, Tenn. Shelving and counter for stores	Aug. 28,1877	936	278	12	383
	Mayo, Israel C. (*See* Currier, John J., assignor.)					
192,443	Mayo, Oscar, Evanston, Ill. Knob-fastener	June 26,1877	978	294	11	1134
	Mayo, William H. (*See* Mayo. Frederick H. and W. H.)					
196,303	McAdam, John V., Chicago, Ill. Wood-pavement	Oct. 23,1877	661	191	12	678
192,444	McAdams, John, Brooklyn, N. Y. Ruling-machine	June 26,1877	979	294	11	1134
189,051	McAfee, William and Y. P. True, Clarence, Mo. Agricultural boiler	Apr. 3,1877	37	13	11	564
8,004	McAleer, George, Worcester, Mass. Folding-chair (Reissue)	Dec. 18,1877	771	233	12	1074
196,688	Same same	Oct. 30,1877	1054	305, 306	12	744
196,689	Same same	Oct. 30,1877	1054	306	12	744
186,269	McAleer, Philip, Washington, D. C. Paper-cutting machine	Jan. 16,1877	446	137	11	83
192,709	McAllister, Athel A., Shady Grove, Ga. Fence	July 3,1877	156	44	12	34
188,159	McAllister, David, Walton, N. Y. Air-heating attachment	Mar. 6,1877	191	59	11	406
	McArdle, John. (*See* Harvey, Lewis C., assignor.)					
197,282	McArthur, George, San Leandro, Cal. Chill-mold for wheels	Nov. 20,1877	584	173	12	861
196,918	McArthur, William, Philadelphia, Pa. Composition for fire-kindlers	Nov. 6,1877	190	55	12	786
193,416	McAuliffe, Patrick, New York, N. Y. Coffee-cleaner	July 24,1877	902	275	12	158
7,550	McAvoy, Hugh L., assignor to D. L. Bartlett and H. W. Robbins, Baltimore, Md. Fire-pot and grate for fire-place stoves (Reissue)	Mar. 6,1877	267	83	11	415
188,808	McBarron, Michael, Boston, Mass. Rubber attachment for horseshoes to prevent interfering	Mar. 27,1877	872	265	11	521
	McBee, William. (*See* Cronshorn & McBee.)					
197,877	McBrayer, James R., Ashland, Ky. Ironing-table	Dec. 4,1877	170	51	12	970
189,481	McBride, Edward, Vermillionville, La. Washing-machine	Apr. 10,1877	470	148, 149	11	628
198,647	McBride, Gideon, Dover Hill, Ind., assignor to self, W. F. Faas, and F. Perdue, Minerva, Ohio. Tellurian	Dec. 25,1877	971	296	12	1111
198,246	McBride, Scott, Saint Catharine, Mo. Animal-trap	Dec. 18,1877	580	175	12	1045
	McBride, Thomas J. (*See* McClellan & McBride.)					
	McBryde & Orr. (*See* Stichbury, Frederick, assignor.)					
189,868	McBurney, Charles, Boston, Mass. Blanket for calico-printing	Apr. 24,1877	894	273	11	699
195,941	McCabe, Bartholomew G., Middletown, N. Y. Surgical apparatus for fracture of the clavicle	Oct. 9,1877	265	75	12	606
188,529	McCaffrey, Edward, Albany, N. Y. Motor	Mar. 20,1877	539	179	11	473
191,697	McCaffrey, John, jr., assignor of one-third interest to S. M. Stedman, Lawrence, Mass. Stop-motion-fork slide	June 5,1877	176	55	11	1000
191,873	McCaffrey, Thomas H., assignor to self, H. J. Gorman, and W. J. Armstrong, Providence, R. I. Sad-iron	June 12,1877	354	109	11	1028
196,371	McCallip, William W., Columbus, Ohio. Machine for rolling wire rods	Oct. 23,1877	727	209	12	657
	McCallum, A., *et al.* (*See* Slusser, Benjamin, assignor) (Reissue.)					
191,455	McCambridge, Andrew, Philadelphia, Pa. Fire-escape	May 29,1877	1372	414	11	959

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	McCamish, Albert. (*See* Taylor & McCamish.)					
190,605	McCartan, John, New York, N. Y. Shirt-drying apparatus	May 8, 1877	503	150	11	820
197,559	McCarter, John G., Milford, and E. L. Wheeler, Hudson, assignors to A. Eastman, Boston, Mass. Machine for finishing welt-seams	Nov. 27, 1877	884	263	12	914
191,698	McCartey, Charles C., Knoxville, Tenn. Producing wrought iron and steel from cold short pig	June 5, 1877	177	55	11	1000
187,883	McCarthy, John, Syracuse, N. Y. Screw-fastening for coffins	Feb. 27, 1877	984	305	11	361
188,393	Same.....Removable face-glass for coffins	Mar. 13, 1877	439	136	11	446
193,015	McCarthy, William, assignor of one-half interest to W. M. Flood, Philadelphia, Pa. Lamp	July 10, 1877	470	142	12	85
	McCarty, David, *et al.* (*See* Lewars, John H., assignor.)					
189,246	McCarty, David, assignor of part interest to E. A. Collins and J. H. Lewars, Philadelphia, Pa. Lamp for burning hydrocarbon oils, &c	Apr. 3, 1877	215	72	11	587
193,531	McCarty, Ezra B., assignor of one-half interest to J. Heagerty, Plantersville, Tex. Car-coupling	July 24, 1877	1014	305	12	173
	McCarty, James. (*See* Beauregard & Wroath, assignors.)					
194,608	McCarty, Michael, Pueblo, Colo. Baling-press on wheels	Aug. 28, 1877	848	253	12	371
195,517	McCauley, Charles, assignor of one-half interest to J. Thompson, New Orleans, La. Evaporating-pan	Sept. 25, 1877	794	235	12	536
188,928	McCauley, George W., Pleasant Plains, Ark. Cotton-gin feeder and cleaner	Mar. 27, 1877	983	301	11	537
	McCausland, William L. (*See* Gingras, Joseph G., assignor.)					
197,648	McChesney, Martin H., assignor to self and M. K. Bortree, Jackson, Mich. Key-board for pianos and organs	Nov. 27, 1877	975	290	12	927
	McClain, Andrew. (*See* Gardner, Jefferson M., assignor.)					
188,650	McClain, Andrew, Nashville, Tenn. Refrigerator and filter	Mar. 20, 1877	694	213	11	489
187,293	McClain, Henry L., Avon, Ohio. Miter-box	Feb. 13, 1877	375	119	11	265
196,919	McClain, James D., Saint Joseph, Mo. Device for depositing and covering pictures in tombstones, &c	Nov. 6, 1877	191	55	12	786
185,940	McClanahan, William H., Franklin, Ind. Earth-pulverizer	Jan. 2, 1877	132	39	11	25
193,016	McClave, William, Pittston, Pa. Can for fluids	July 10, 1877	471	142	12	85
191,699	McClellan, David T., and T. J. McBride, Mount Vernon, Ohio. Barrel-cover	June 5, 1877	178	55	11	1000
191,245	McClelland, William C., Fowler, Ill. Three-horse equalizer	May 29, 1877	1181	354	11	934
	McClintock, Elias J. (*See* Owen & McClintock.)					
	McClintock, J. M., *et al.* (*See* Day, Timothy R., assignor.)					
189,120	McClintock, William C., Hooperston, Ill., assignor to self and W. B. Steele, Bernhart's Mills, Pa. Rod-coupling	Apr. 3, 1877	95	34	11	572
186,743	McCloskey, James, East Cambridge, Mass. Soda-carbonating apparatus	Jan. 30, 1877	939	291	11	170
191,987	McCloy, Eli C., Norwalk, assignor to self and B. A. F. Greer, Mount Vernon, Ohio. Lamp	June 12, 1877	467	144	11	1043
	McClymonds, William. (*See* Hodges & Blim, assignors.)					
187,474	McCobb, William P., Boston, Mass. Shutter-worker	Feb. 20, 1877	571	177	11	298
191,454	Same.....same	May 29, 1877	1371	414	11	959
195,146	McColl, Mary J., Allendale, assignor to S. Meyenberg, Paterson, N. J. Making artificial moss for ornamenting picture-frames, &c	Sept. 11, 1877	403		12	464
188,021	McCollom, George W., assignor to Polo Harvester Company, Polo, Ill. Harvester-reel	Mar. 6, 1877	62	18	11	389
197,045	McCollum, Peter, Fayette, Mo. Hand corn-planter	Nov. 13, 1877	328	97	12	815
186,591	McCollum, William W., Selma, Ala., assignor to H. F. Mullen. Car-coupling	Jan. 23, 1877	794	245	11	140
192,077	McComas, Edwin F., assignor of one-half interest to J. H. Silveria, Erie, Pa. Curtain-roller and bracket	June 19, 1877	584	177	11	1076
	McComb, Andrew D. (*See* McComb, Andrew T. and A. D.)					
193,530	McComb, Andrew T. and A. D., Oxford, Ala. Farm-gate	July 24, 1877	1013	305	12	173
	McConn, Hugh. (*See* Parmer, Devare, assignor.)					
197,154	McConnell, Abraham, Oxford, Ohio. Feather-renovator	Nov. 13, 1877	441	130	12	832
198,648	McConnell, Alexander E., New Orleans, La. Foundation for honey-combs	Dec. 25, 1877	972	296	12	1111
189,482	McConnell, Charles E., Columbus, Wis. Box for holding coin	Apr. 10, 1877	471	149	11	628
	McConnell, Edward. (*See* Cleveland & McConnell.)					
188,160	McConnell, Hugh, Cleveland, Ohio. Stove attachment for utilizing heat	Mar. 6, 1877	192	59	11	406
195,518	McCord, Marcius L., Nashville, Ill. Sight for fire-arms	Sept. 25, 1877	794	235	12	536
	McCormick, C. H., *et al.* (*See* Baker, William R., assignor.)					
	Same.....(*See* McCormick, Baker & Erpelding, assignors.)					
	Same.....(*See* Withington, Charles B., assignor.)					
	McCormick, Henrietta L. (*See* Smith, Andrew J., assignor).....(Reissue.)					
189,946	McCormick, James, Glidden, Iowa. Harness-saddle-tree	Apr. 24, 1877	969	297	11	710
	McCormick, J. J., *et al.* (*See* Bates, Samuel A., assignor.)					
193,770	McCormick, Leander J., W. R. Baker, and L. Erpelding, assignors to C. H. and L. J. McCormick, Chicago, Ill. Harvester	July 31, 1877	1270	381, 382	12	219
	McCormick, L. J., *et al.* (*See* Baker, William R., assignor.)					
	Same.....(*See* Withington, Charles B., assignor.)					
	McCormick, Lewis C. (*See* Gibford & McCormick.)					
188,746	McCormick, Mark T., Petrolia, Pa. Oil-well-wall cleaner	Mar. 27, 1877	797	244	11	512
195,625	McCormick, Thomas D., Massillon, Ohio. Corn-harvester	Sept. 25, 1877	891	265	12	550
188,651	McCormick, William D., Scranton, Pa. Combined slate and scholar's companion	Mar. 20, 1877	695	213	11	489
	McCoy & Co. (*See* McCoy, Eugene, assignor.)					
196,815	McCoy, Charles A., Edenburg (Knox P. O.), Pa. Torpedo for oil-wells	Nov. 6, 1877	78	24	12	772
196,243	McCoy, Eugene, assignor to McCoy & Co., Ottumwa, Iowa. Pump	Oct. 16, 1877	587	169	12	659
190,885	McCray, Joseph A., Cleveland, Ohio. Nut-lock	May 15, 1877	795	235	11	866
194,161	McCreight, William G., Atlanta, Miss. Wagon-tire tightener	Aug. 14, 1877	399	119	12	294
	McCrory, William. (*See* Poole, Middleton, assignor.)					
186,358	McCrum, George R., Chicago, Ill. Pump	Jan. 16, 1877	554	168	11	96
	McCue, I. Marshall. (*See* Simpson, Ebon B., assignor.)					
192,446	McCulla, William J., Estherville, Iowa. Grain-separator	June 26, 1877	980	294, 295	11	1134
187,028	McCullough, James, Pensacola, Fla. Earth-auger	Feb. 6, 1877	109	36	11	217
	McCullough, M., *et al.* (*See* Smith, William, assignor).....(Reissue.)					
197,649	McCullough, Mary J., Lawrence, Kans. Steam-cooker	Nov. 27, 1877	976	291	12	927
	McCully, William, *et al.* (*See* Singleton, Benjamin R., assignor).....(Reissue.)					
189,317	McCume, Benjamin F., Barboursville, W. Va. Sash-balance	Apr. 10, 1877	319	100	11	608
189,245	McCune, Joseph B., assignor of one-half interest to R. M. Wanzer, Hamilton, Canada. Molding-machine	Apr. 3, 1877	214	72	11	587
188,394	McCune, William H., assignor to Pittsburgh Steel Casting Company, Pittsburg, Pa. Roll for beveling agricultural irons	Mar. 13, 1877	440	137	11	446
193,769	McCurdy, John W. C., Atwood, Pa. Cutter-head	July 31, 1877	1270	381	12	219
187,475	McCutchon, David R., Chatsworth, Ill. Egg-tester	Feb. 20, 1877	572	177	11	298

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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191,606	McDermott, Austin S., Prairie Creek (Melleray P. O.), Iowa. Cultivator	June 5, 1877	88	27	11	988
	McDermott, Dennis J. (*See* Snell & McDermott.)					
	McDermott, Walter. (*See* Fine & McDermott.)					
195,519	McDevitt, Bernard, Chicago, Ill. Support for street-car tongues	Sept. 25, 1877	795	235	12	536
190,606	McDill, Thomas W., Batavia, Iowa. Cultivator	May 8, 1877	504	150	11	820
	McDonald, Alexander. (*See* Hartnoll, John, assignor.)					
197,283	McDonald, Alexander, Belmont, Mass. Hammer for dressing stone	Nov. 20, 1877	585	174	12	861
188,530	McDonald, Alexander U., New York, N. Y. Pegging-awl handle	Mar. 20, 1877	580	179	11	474
193,417	McDonald, Frederick J., Madison, Ohio. Insect-destroyer	July 24, 1877	903	275	12	158
186,592	McDonald, Floyd F., Blacksburg, Va. Artificial leech	Jan. 23, 1877	795	245	11	140
	McDonald, Hugh. (*See* Bunton, William, assignor.)					
	McDonald, John S. (*See* Berry, William, assignor.)					
188,747	McDonald, Oliver P., Volusia County, Fla. Automatic governor for wind-wheels	Mar. 27, 1877	798	244	11	512
194,609	McDonald, Samuel J., and J. W. Burton, Gallatin, Mo. Stirrup	Aug. 28, 1877	849	253	12	371
198,134	McDonald, Thomas A., Durham, Nova Scotia. Shoe-lace fastening	Dec. 11, 1877	432	135	12	1017
198,205	McDonald, Thomas E., New Brunswick, N. J. Washing-machine	Dec. 18, 1877	522	{161 162	12	1037
	McDonald, Walter. (*See* Palmer, Samuel M., assignor.)					
	McDonald, William. (*See* Ellis & McDonald.)					
189,374	McDonel, George H., J. Thorn, and S. Ewing, Fostoria, Ohio. Weed-hider	Apr. 10, 1877	368	119	11	615
195,626	McDonough, Frank, Eau Claire, Wis. Device for cooling saws	Sept. 25, 1877	893	265	12	550
194,360	McDonough, Thomas, Mont Clair, N. J. Fish-plate bolt for railway-rails	Aug. 21, 1877	604	181	12	328
190,060	McDougal, Edwin R., Indianapolis, Ind. Brick-kiln	Apr. 20, 1877	1099	334	11	726
189,869	McEachern, John D., Galt, Canada, and D. H. Burrell, Little Falls, N. Y. Wooden barrel-hoop	Apr. 24, 1877	895	273	11	699
198,494	McEachren, John D., Galt, Canada. Machine for cutting veneers	Dec. 18, 1877	720	{218 319	12	1066
192,926	McElhinner, Mark P., assignor to R. W. Simpson, Montreal, Canada. Combined blotter and ruler	July 10, 1877	388	115	12	73
	McEntire, James M., *et al.* (*See* Starnes, John H., assignor.)					
188,161	McEntire, Richard S., Burlington, Iowa. Ironing-table	Mar. 6, 1877	193	59	11	406
187,545	McEwan, Michael J., New York, N. Y. Water-closet	Feb. 20, 1877	634	197	11	306
190,721	McEwen, Ezra S., Lisbon, Ill. Corn-sheller	May 15, 1877	651	193	11	846
	McFadden, John J. (*See* Baker, John S., assignor.)					
197,785	McFadden, George A., Jordan Station, Ky. Cooking-stove	Dec. 4, 1877	82	25	12	957
	McFarland, Francis J. (*See* Brown, McFarland, & Brown.)					
186,593	McFarland, Josiah, Columbus, Ohio. Fire-kindler	Jan. 23, 1877	796	245	11	140
198,135	McFarland, Lewis H., Marshalltown, Iowa. Barbed-wire fence	Dec. 11, 1877	433	135	12	1017
190,773	McFarland, William. Trenton, N. J. Hot-air furnace	May 15, 1877	695	205	11	852
188,022	McFeely, Thomas, Marion, Ind., assignor to S. E. Griscom, Pottsville, Pa. Millstone-dressing machine	Mar. 6, 1877	63	18, 19	11	389
192,270	Same.....same	June 19, 1877	783	238	11	1096
190,231	McGaffey, Ives W., Chicago, Ill. Hose-carriage	May 1, 1877	115	34	11	761
192,836	Same..... Exercising-machine	July 10, 1877	307	90	12	62
188,476	McGann, Patrick, Allegheny, assignor to Lewis, Oliver & Phillips, Pittsburg, Pa. Rolling-mill	Mar. 20, 1877	531	164	11	467
187,765	McGann, Thomas F., Boston, Mass. Gas-shade holder	Feb. 27, 1877	863	269	11	345
194,877	Same.....Regulator for gas-burners	Sept. 4, 1877	120	37	12	417
193,532	McGee, Charles, Elwood, Kans. Cultivator	July 24, 1877	1015	306	12	174
187,657	McGee, Charlotte A., Jackson, Mich. Corset	Feb. 20, 1877	742	229	11	320
194,045	Same.....same	Aug. 14, 1877	265	78	12	277
185,941	McGeorge, Horatio D., assignor to N. H. McGeorge, Morgantown, W. Va. Wagon-jack	Jan. 2, 1877	133	39	11	25
	McGeorge, Nimrod H. (*See* McGeorge, Horatio D., assignor.)					
188,653	McGill, George W., New York, N. Y. Combined erasive tip and pencil-point protector	Mar. 20, 1877	697	214	11	490
	McGill, Peter. (*See* Stuart, David J., assignor.)					
186,861	McGill, William C., Washington, D. C. Shutter-worker	Jan. 30, 1877	1067	329	11	185
187,884	McGlennen, Charles W. and O., Hanoverton, Ohio. Apparatus for producing optical illusions	Feb. 27, 1877	985	305	11	361
	McGlennen, Olive. (*See* McGlennen, Charles W. and O.)					
	McGlensey, James, administrator. (*See* Fullagar, William).....(Reissue.)					
193,887	McGovern, Peter, assignor to G. L. Davis, J. A. Wiley, J. M. Stone, G. G. Davis, J. H. Stone, and J. H. Davis, North Andover, Mass. Spinning-mule	Aug. 7, 1877	86	28	12	246
197,522	McGowan, James, Worcester, Mass. Steam-muffler for vacuum car-brakes	Nov. 27, 1877	845	252	12	908
189,318	McGowan, John, Mifflin Township, Pa. Vehicl-wheel	Apr. 10, 1877	320	101	11	608
187,658	McGowen, James W., Marlborough, N. C. Vehicle-spring	Feb. 20, 1877	742	230	11	320
191,456	McGrah, Thomas, Sheffield, England. Bobbin-winder for sewing-machines	May 29, 1877	1373	414	11	959
143,825	McGrath, Michael, Cleveland, Ohio, assignor of one-half interest to J. Mahon, jr. Draw-bridge	Aug. 7, 1877	30	10	12	238
192,651	McGrew, John P., Mount Pleasant, Iowa. Lifting-jack	July 3, 1877	101	29	12	26
198,136	McGrew, William H., Peru, Ind. Force-pump	Dec. 11, 1877	434	135	12	1017
	McGuigan, Michael. (*See* McGuigan, Peter, assignor.)					
194,361	McGuigan, Peter, assignor of one-half interest to M. McGuigan, Mannville, Wis. Boot-leg supporter	Aug. 21, 1877	604	181	12	328
	McGuinness, James, *et al.* (*See* Hangliter, Robert P., assignor.)					
191,700	McGuire, Joseph R., Ansonia, Conn. Carriage-perch stay	June 5, 1877	178	56	11	1000
193,533	McHugh, Edward, Huntingdon, Pa. Car-axle lubricator	July 24, 1877	1016	306	12	174
190,774	McIlrevey, David, Riceville, Iowa. Harrow	May 15, 1877	696	206	11	852
	McIlvain & Sons, William. (*See* Jones, Griffith W., assignor.)					
189,765	McIlvain, William, Philadelphia Pa. Wash-boiler	Apr. 17, 1877	773	237	11	675
190,607	McInnes, John, Jersey City, N. J. Beer-measure	May 8, 1877	505	150	11	820
195,147	McIntire, Dewitt C., Elk City, Pa. Torpedo for oil-wells	Sept. 11, 1877	404	121	12	464
186,430	McInturff, Robert, Yancy County, N. C. Moth-trap	Jan. 23, 1877	641	196	11	120
193,377	McInturff, Robert, Burnsville, N. C. Bee-hive	July 24, 1877	865	265	12	153
187,659	McIntyre, Anson L., assignor of one-half interest to E. G. Peckham, Toledo, Ohio. Plow-point	Feb. 20, 1877	742	230	11	321
194,923	McIntyre, Frank P., Philadelphia, Pa. Street-car awning	Sept. 4, 1877	167	52	12	423
192,179	McIntyre, John M., assignor of one-third interest to W. Duncan, Lockport, N. Y. Millstone dresser	June 19, 1877	682	209	11	1083
	McKay, Andrew W. (*See* Bugbee, Alpheus, assignor.)					
188,253	McKay, Ferdinand C. D., Paterson, N. J. Shade-roller	Mar. 13, 1877	996	93	11	426
188,809	McKay, Gordon, Cambridge, Mass. Machine for sewing boots and shoes	Mar. 27, 1877	873	265	11	521

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188,810	McKay, Gordon, Cambridge, Mass. Nailing and pegging machine	Mar. 27, 1877	875	265	11	522
190,153	Same....Making shoes	May 1, 1877	42	12	11	752
191,874	Same....Machine for uniting the soles to uppers of boots and shoes	June 12, 1877	354	109, 110	11	1028
	McKay, John B., *et al.* (*See* Nevill, George W., assignor.)					
	McKay Metallic Fastening Association. (*See* Goddu, Louis, assignor.)					
	McKee, George, *et al.* (*See* Lallement, Pierre, assignor) (Reissue.)					
189,121	McKee, George C., Jackson, Miss. Cotton-press	Apr. 3, 1877	96	34	11	572
198,649	McKee, George W., Brooklyn, N. Y. Fire-escape	Dec. 25, 1877	973	296	12	1111
	McKee, John M. (*See* Green, John, assignor.)					
191,358	McKee, William J., Petrolia, Pa. Sand-pump reel	May 29, 1877	1278	386	11	947
194,162	Same....Bull-wheel for derricks	Aug. 14, 1877	400	119	12	294
186,594	McKeehan, Charles H., assignor to self and V. T. Hannon, Texarkana, Ark. Force-pump	Jan. 23, 1877	796	245	11	140
191,457	McKeehan, Charles H., assignor of one-half interest to V. T. Hannon, Texarkana, Ark. Force-pumps	May 29, 1877	1374	414, 415	11	959
194,256	McKeever, Edward A., Philadelphia, Pa. Recovery of spirits from spent charcoal of rectifying-filters	Aug. 14, 1877	483	146	12	306
194,163	McKeever, John, Jersey City, N. J. Dredging-bucket	Aug. 14, 1877	401	119	12	294
192,381	McKeever, Timothy W., assignor to Benhams & Stoutenborough, New York, N. Y. Sheet-metal-seaming-machine	June 26, 1877	923	277	11	1126
196,158	Same....Odorless commode	Oct. 16, 1877	498	145	12	647
	McKelvy, William M. (*See* Pope, Anthony, assignor.)					
196,534	McKenna, William S., Pittsburg, Pa. Heating-furnace	Oct. 30, 1877	907	262	12	724
188,654	McKenney, Almeron, Evansville, Wis. Stump-extractor	Mar. 20, 1877	697	214, 215	11	490
188,655	Same....same	Mar. 20, 1877	700	215	11	490
	McKenny, W. J. (*See* Fitch, Charles L., assignor.)					
	McKenzie, Hector. (*See* Coulter & McKenzie.)					
191,875	McKenzie, William, New York, N. Y. Roll for reducing tubes	June 12, 1877	357	110	11	1028
191,988	McKenzie William, assignor of one-half interest to J. H. Berry, Detroit, Mich. Gas-stove	June 12, 1877	468	144	11	1043
	McKillip, William A., *et al.* (*See* Haines, Lewis H., assignor.)					
	McKimm, Edgar N. (*See* Amidon & McKimm.)					
198,650	McKinley, Zolotes, and V. True, Laclede, Mo. Gas-stove	Dec. 25, 1877	975	297	12	1111
	McKirgan, Alexander. (*See* Eno, Joseph A., assignor.)					
7,965	McKnight, Harvey W., Easton, Pa. Refrigerator (Reissue)	Nov. 27, 1877	1053	315	12	937
186,263	McKown, Alexander W., Honesdale, Pa. Auxiliary spring for wagons	Jan. 16, 1877	446	137	11	83
192,383	McKown, Alexander W., Kimble, Pa. Auxiliary wagon-spring	June 26, 1877	924	277	11	1126
192,775	Same....same	July 3, 1877	217	63	12	42
194,525	McLane, George A., Chicago, Ill. Pencil-sharpener	Aug. 28, 1877	778	231	12	361
186,595	McLaughlin, Frank, New York, N. Y. Toy trumpet	Jan. 23, 1877	797	246	11	141
192,271	McLaughlin, John, New York, N. Y. Exercising-machine	June 19, 1877	784	238	11	1096
186,596	McLaughlin, John L., Olwein, Iowa. Grain-elevator	Jan. 23, 1877	798	246	11	141
191,701	McLaughlin, Thomas, New York, N. Y. Spinning-top	June 5, 1877	179	56	11	1000
193,771	McLean, Donal and J. Herverk, Valley, Pa. Temper-screw for use in well-boring	July 31, 1877	1272	382	12	220
188,748	McLean, Edwin D., New Athens, Ill. Coal-screen	Mar. 27, 1877	798	244	11	512
187,029	McLean, James P., New York, N. Y. Preserving animal and vegetable substances	Feb. 6, 1877	109	37	11	217
187,030	Same....same	Feb. 6, 1877	110		11	217
188,023	Same....Corset	Mar. 6, 1877	64	19	11	389
	McLean, John N. (*See* Selden & McLean.)					
	McLean, William W., *et al.* (*See* Devoe, Benjamin G., assignor.)					
	McLellan, H., *et al.* (*See* Milne, Robert D., assignor.)					
	McLendon, Benjamin L. (*See* Smith, William B., assignor.)					
188,929	McLennan, Donald, West Green, assignor of one-half interest to M. A. Davis, London, England. Extinguishing fire, and apparatus therefor	Mar. 27, 1877	985	302	11	537
196,986	McLennan, John K., Elmira, Ill. Shoveling-board for wagons	Nov. 13, 1877	268	79	12	806
195,298	McLeran, Alvord M., Tabor, Iowa. Apparatus for unloading and elevating grain, bricks, &c., from wagons	Sept. 18, 1877	572	166	12	496
191,065	McLoughlin, Edward J., New York, N. Y. Toy money-box	May 22, 1877	992	295	11	900
190,442	McLoughlin, Francis, assignor of one-half interest to P. Frazer, Peoria, Ill. Automatic water-pipe pressure cut-off	May 8, 1877	344	101	11	799
192,776	McMahan, George M., assignor of one-half interest to S. K. Hathaway, Carter's Creek Station, Tenn. Car-coupling	July 3, 1877	219	63	12	42
193,534	McMahan, George M., Carter's Creek Station, and J. T. Craik, Columbia; said Craik, assignor of one-half interest to S. K. Hathaway, Carter's Creek Station, Tenn. Railway-switch	July 24, 1877	1017	306	12	174
187,032	McMahan, Morgan S., San José, Cal. Gopher gang-plow	Feb. 6, 1877	112	37	11	217
187,660	McMains, Alexander C., San Francisco, Cal. Spring-mattress	Feb. 20, 1877	744	230	11	321
	McManus, Henry. (*See* Plass & McManus.)					
198,652	McManus, Michael B., Titusville, Pa. Sand-pump reel	Dec. 25, 1877	976	297	12	1111
190,349	McManus, Robert, and R. R. Colburn, Ansonia, Conn. Metal-covered knob	May 1, 1877	230	68	11	776
187,401	McMarlin, James A., Pittsburg, Ind. Hedge-trimmer	Feb. 13, 1877	481	150	11	279
185,864	McMillan, James, Philadelphia, Pa. Thread-spool	Jan. 2, 1877	49	15	11	15
196,987	McMillan, William, Cleveland, Ohio. Machine for cutting indexes	Nov. 13, 1877	269	79	12	806
189,373	McMillen, James F., Mansfield, Ohio. Fly-fan	Apr. 10, 1877	367	118	11	614
198,137	McMillon, George W., Manchester, Tenn. Bee-hive	Dec. 11, 1877	434	136	12	1018
187,031	McMorries, Joseph, Newberry, S. C. Hypodermic syringe	Feb. 6, 1877	111	37	11	217
198,651	McMullen, George, Columbia, Pa. Advertising-brick	Dec. 25, 1877	976	297	12	1111
	McMurchy, Harvey, *et al.* (*See* Snelbaker, David T., assignor.)					
196,589	McMurphy, James H., Merced, and E. W. Chapman, San Francisco, Cal.; said McMurphy assignor to said Chapman. Excavating-machine	Oct. 30, 1877	959	278	12	731
	McMurray, James S., *et al.* (*See* Brandon, Charles T., assignor.)					
194,780	McMurray, Robert K., West New Brighton, N. Y. Fire-bridge for steam-boiler furnaces	Sept. 4, 1877	27	9	12	404
196,244	McMurry, Charles, Gadsden, Tenn. Cotton-scraper	Oct. 16, 1877	587	169, 170	12	659
197,786	McMurry, William, Obion County, Tenn. Churn	Dec. 4, 1877	83	25	12	957
186,862	McMurtrie, John S., Philadelphia, Pa. Preventing the freezing of waste-water pipes	Jan. 30, 1877	1068	330	11	185
187,162	McMurtrie, William, Oxford Township, N. J. Process and apparatus for charring the interior of barrels	Feb. 6, 1877	230	75	11	234
193,826	McMurtrie, William, Warren County, N. J. Charring the interior of barrels, casks, &c	Aug. 7, 1877	30		12	238

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
197, 739	McMurtrie, William, Warren County, N. J. Eating compound for hides or skins	Dec. 4, 1877	33		12	951
190, 886	McMurtry, Joseph, Pittsburg, Pa. Lamp-chimney	May 15, 1877	796	236	11	866
	McMurtry, William J., *et al.* (*See* Thomas, George H., assignor.)					
189, 483	McNair, Milton H., Meadville, Pa. Device for fitting and polishing cylinders and rings	Apr. 10, 1877	471	149	11	628
191, 458	McNair, Thomas F., Worthville, Ga. Cultivator	May 29, 1877	1375	415	11	959
198, 653	McNair, William L., Allegheny, Pa. Heating and puddling gas-furnaces	Dec. 25, 1877	977	297	12	1112
194, 046	McNall, James H., Allegheny County, Pa. Corn-harvester	Aug. 14, 1877	265	79	12	277
190, 608	McNally, Andrew, assignor to Rand, McNally & Co., Chicago, Ill. Mounted map	May 8, 1877	506	150	11	821
193, 017	McNally, Thomas W., Louisville, Ky. Oil-can	July 10, 1877	472	143	12	85
194, 453	McNamee, Richard, Philadelphia, Pa. Machine for sizing and varnishing paper	Aug. 21, 1877	697	208	12	341
186, 744	McNaughton, William, Brooklyn, N. Y. Wardrobe-bedstead	Jan. 30, 1877	940	292	11	170
198, 405	McNeal, James, Flat Rock, Ill. Swinging-cradle for crib	Dec. 18, 1877	723	219	12	1066
197, 046	McNeal, William, Stockton, N. J. Shoulder-plate for spoke-finishing machines	Nov. 13, 1877	329	97	12	815
	McNeely, Thomas M., *et al.* (*See* Pollard, James M., assignor.)					
	McNeely, William L., *et al.* (*See* Pollard, James M., assignor.)					
	McNeil, William H. (*See* Wilder & McNeil.)					
	McNeill, John. (*See* Decker, Alexander C., assignor.)					
189, 122	McNeill, John, Chicago, Ill., assignor of one-half interest to A. C. Decker, Bushnell, Ill. Barbed fence-wire	Apr. 3, 1877	96	35	11	572
198, 138	McNeill, Thomas E, New York, N. Y. Return-steam trap	Dec. 11, 1877	435	136	12	1018
196, 816	McNeill, William T., and G. H. Lambert, Worcester, Mass. Iron fence-post	Nov. 6, 1877	78	24	12	772
187, 033	McNeille, John R., Philadelphia, Pa. Automatic car-fan	Feb. 6, 1877	113	37	11	217, 218
190, 505	McNicholas, Thomas, assignor to self and T. Walker, Memphis, Mo. Brick-machine	May 8, 1877	410	119	11	808
7, 732	McNutt, James C., Blairsville, and A. B. Furman, Strattonville, Pa., assignor, by mesne assignments, to J. Oliver. Plow (Reissue)	June 12, 1877	536	164	11	1052
188, 162	McPherson, Daniel, Caledonia, N. Y. Grain-binder	Mar. 6, 1877	193	59, 60	11	406
	McPherson, Ebenezer M. (*See* Pillard & McPherson.)					
187, 232	McPherson, James A., Brunswick, N. Y. Torch	Feb. 13, 1877	315	102	11	257
	McPherson, James R, *et al.* (*See* Johnson, Henry B., assignor.)					
	McPherson, J. B. (*See* Marshall, John B., assignor.)					
196, 159	McPherson, Malcom J., West Campbell, Mich. Gate	Oct. 16, 1877	499	145	12	647
187, 476	McQuary, Allen L., La Belle, Mo. Churn	Feb. 20, 1877	573	177	11	298
195, 299	Same Harness-buckle	Sept. 18, 1877	574	167	12	496
195, 148	McQuatters, Alexander, Chicago, Ill. Sliding-door	Sept. 11, 1877	404	121	12	465
188, 024	McQuiniff, Henry, Frankfort, Ohio. Corn-planter	Mar. 6, 1877	64	19	11	389
193, 985	McRae, Donald B., Bay City, Mich. Circular-saw	Aug. 7, 1877	187	56	12	259
193, 171	McRae, John B., Mount Holly, Ark. Stone-quarrying machine	July 17, 1877	633	192	12	114
188, 163	McRavey, Edward J. and F. W., and J. Schwartz, Milwaukee, Wis. Coupling for railway-train telegraphs	Mar. 6, 1877	197	60	11	406
	McRavey, Frank W. (*See* McRavey & Schwartz.)					
197, 386	McShary, John, Mansfield, Ohio. Truss	Nov. 20, 1877	689	206	12	877
193, 172	McSpirit, James, Jersey City, N. J. Dredge-bucket	July 17, 1877	634	192	12	114
197, 387	McTighe, James J., Alpsville, Pa. Telephone or speaking-telegraph	Nov. 20, 1877	690	207	12	877
198, 406	Same same	Dec. 18, 1877	724	219	12	1066
	McTighe, Thomas J. (*See* Bingham & McTighe.)					
	McVicar, Archie, *et al.* (*See* Montieth, Robert H., assignor.)					
	McWard, J. A., *et al.* (*See* Foley, Andrew, assignor.)					
188, 930	McWilliams, John, Providence, R. I. Buffing and polishing machine	Mar. 27, 1877	985	302	11	537
198, 206	McWilliams, John, assignor of one-half interest to E. B. Tilden, Prairie City, Iowa. Can-opener	Dec. 18, 1877	523	162	12	1037
	Mead, D. E., *et al.* (*See* Schaeffer, Arthur D., assignor.)					
196, 690	Mead, Enos, Dexter, Iowa. Sash holder	Oct. 30, 1877	1055	306	12	744
197, 484	Mead, George, Detroit, Mich. Disintegrating apparatus for reducing grain, &c	Nov. 27, 1877	802	239, 240	12	902
	Mead, George F., *et al.* (*See* Wiswell, Theodore L, assignor.)					
	Mead, H. E., *et al.* (*See* Schaeffer, Arthur D., assignor.)					
191, 161	Mead, Ira W., Falls Village, Conn. Tamping-tool	May 22, 1877	1083	324	11	912
197 155	Mead, Ira W., Falls Village, assignor of one half interest to L. Munson, Canaan, Conn. Vehicle-wheel	Nov. 13, 1877	442	130	12	832
198, 407	Same Fifth wheel for vehicles	Dec. 17, 1877	725	219	12	1066
194, 526	Mead, John, Boston, Mass. Corset	Aug. 28, 1877	780	231	12	361
193, 983	Mead, John F., De Kalb, Ill. Plow	Aug. 7, 1877	185	56	12	259
194, 704	Means, Charles, Modoc City, Pa. Pump to remove water and prevent deposits in oil-wells	Aug. 28, 1877	937	278	12	383
186, 597	Means, William H., Simsport, La. Hampering device for horses	Jan. 23, 1877	798	246	11	141
191, 702	Mearns, James H., Philadelphia, Pa. Grate	June 5, 1877	1e0	53	11	1000
192, 777	Same Grate for stoves, ranges, &c	July 3, 1877	220	63	12	42
195, 831	Mears, Ephraim, assignor to self and S. M. Young, Terre Haute, Ind. Napkin-holder	Oct. 2, 1877	136	39	12	580
195, 381	Mears, J. Howell, Philadelphia, Pa. Chlorinating ores	Sept. 18, 1877	648		12	507
	Mecklenborg, John B., *et al.* (*See* Baackes, John M. E., assignor.)					
	Medart, Frederick. (*See* Medart, Philip, assignor.)					
	Medart, Fredrick. (*See* Medart, Philip and F.)					
187, 477	Medart, Philip, Saint Louis, Mo. Gymnastic apparatus	Feb. 20, 1877	574	178	11	298
191, 066	Medart, Philip, assignor of one-half interest to F. Medart, Saint Louis, Mo. Bung-cutting machine	May 22, 1877	993	295, 296	11	900
185, 8 5	Medbury, George W. D., Providence, R. I. Carpet-sweeper	Jan. 2, 1877	50	15	11	15
194, 705	Medearis, John T., assignor of part interest to J. H. Bell, Fayetteville, J. N. Sullivan, Flat Creek, and D. J. Neblitt, Booneville, Tenn. Gin-saw sharpener	Aug. 28, 1877	937	279	12	384
	Medearis, Thomas, *et al.* (*See* Bell, James H., assignor.)					
	Mee, Thomas. (*See* Cosgrove & Mee.)					
187, 661	Meehan, Mathew, Athens, Conn. Pet cock for steam-engines	Feb. 20, 1877	745	231	11	321
197, 560	Meehan, Patrick W., assignor to S. M. Smith, Providence, R. I. Pipe-clamp	Nov. 27, 1877	886	263	12	914
	Meek, James W. (*See* Stone, Charles, assignor.)					
198, 655	Meeker, De Witt C., assignor of one-half interest to M. Halm, C. C. Bellows, and C. P. L. Butler, Columbus, Ohio. Tilting-chair	Dec. 25, 1877	979	298	12	1112
198, 654	Meeker, Lorenzo, Oswego, N. Y. Lifting-jack	Dec. 25, 1877	978	298	12	1112
198, 656	Same same	Dec. 25, 1877	980	298	12	1112
193, 984	Megaw, Jarret, Philadelphia, Pa., assignor of one-half interest to Lobdell Car Wheel Company, Wilmington, Del. Roll-grinding machine	Aug. 7, 1877	185	56	12	259
193, 535	Megill, Edward L., Brooklyn, N. Y. Gas-lighting torch	July 24, 1877	1018	306	12	174
197, 523	Same same	Nov. 27, 1877	847	253	12	909
185, 942	Megginson, Richard, New Castle, Del. Seed-marker	Jan. 2, 1877	134	40	11	25

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
188,931	Meggs, Hosea P., Polkton, N. C. Corn shelling implement	Mar. 27, 1877	986	303	11	538
195,767	Megson, John, South Adams, Mass. Stopping mechanism for looms	Oct. 2, 1877	73	22	12	571
191,359	Méhu, Aime, St. Malo, Franco. Sail-hank	May 29, 1877	1279	386	11	947
	Mehurin, Oscar C. (*See* Mehurin, Oscar F. and O. C.)					
193,341	Mehurin, Oscar F. and O. C., Newark, Ohio. Fire-place	July 24, 1877	831	255	12	149
191,541	Meier, Edward, Detroit, Mich. Jar-cover	June 5, 1877	34	10	11	981
	Meigs, George W, (*See* Willson & Meigs.)					
	Meikle, Thomas. (*See* Dunlop, Robert, assignor.)					
186,863	Meikle, Thomas, Louisville, Ky. Valve for hydraulic elevators	Jan. 30, 1877	1068	330	11	186
195,627	Same.....Machine for bending frog-plates for plows	Sept. 25, 1877	893	265	12	550
190,609	Meissner, Moritz P., and H. E. Romer, Chemnitz, and F. R. Anke, Oelsnitz, assignors to C. H. Weisbach, Chemnitz, Saxony. Yarn-drying machine	May 8, 1877	507	151	11	821
191,360	Melcher, John C., O'Quinn, Tex. Insect-destroyer	May 29, 1877	1279	386	11	947
192,382	Melcher, John W., Oshkosh, Wis. Rowing-gear	June 26, 1877	924	277	11	1126
194,610	Melhuish, Richard M., Hoxton, England. Machine for sewing button-holes	Aug. 28, 1877	850	{253 254}	12	371
	Melick, Frank M. (*See* Powers, Jay W., assignor.)					
195,718	Melkersman, Frederick, Saint Charles, Mo., assignor of one-half interest to T. Kingsford, Oswego, N. Y. Drying and purifying starch by centrifugal action	Oct. 2, 1877	30	9	12	564
192,180	Mellina, Salvatore, New York, N. Y. Motive-power	June 19, 1877	684	209	11	1083
193,263	Mellinger, Christian K., Harrisburg, assignor of one-half interest to J. W. Anderson, Fairfield, Pa. Extension bow-iron for carriage-poles	July 17, 1877	733	224	12	127
189,484	Mellinger, John, Grantsville, Md. Grinding-mill	Apr. 10, 1877	472	{149 150}	11	628
196,160	Mellon, William H., Fern Valley, Iowa. Rotary cutter and shield for plows	Oct. 16, 1877	560	146	12	647
188,531	Melton, Benjamin F., Gainesville, Tex. Buckle	Mar. 20, 1877	581	179	11	474
194,362	Same.....Hopple	Aug. 21, 1877	605	181	12	329
	Melvil, Frederick W., *et al.* (*See* Burtis, William, assignor.)					
193,888	Melville, Frank M., Bloomington, Ill. Device for securing and carrying paper bags	Aug. 7, 1877	89	28	12	247
186,745	Mengel, Charles C., jr., and C. R., Louisville, Ky. Tobacco-plug label and fastener	Jan. 30, 1877	941	292	11	170
	Mengel, Clarence R. (*See* Mengel, Charles C., jr., and C. R.)					
	Menown, Hugh, *et al.* (*See* Wardwell, Simon W., jr., assignor.)					
190,506	Mentzel, Henry D., Baltimore, Md. Tag-machine	May 8, 1877	411	120	11	808
194,706	Same.....Blacking-box	Aug. 28, 1877	938	279	12	384
193,264	Menzel, Edmund R., Hoboken, N. J. Fire-escape	July 17, 1877	734	{224 225}	12	127
	Menzies, William. (*See* Turner, William B., assignor.)					
192,927	Mepham, Samuel, Fayette, Ohio. Straw-cutter	July 10, 1877	389	116	12	73
	Mequillet, Pierre. (*See* Jordan & Mequillet.)					
190,443	Mercer, Evan A., and J. D. C. Pownall, Christiana, Pa. Nut-lock and washer	May 8, 1877	345	101	11	800
188,254	Mercer, Frederick T., Mystic Bridge, Conn. Artificial teeth	Mar. 13, 1877	297	93	11	426
198,139	Mercier, Edward, Springfield, assignor of one-half interest to J. Perry, Holyoke, Mass. Lamp-extinguisher	Dec. 11, 1877	436	156	12	1018
196,304	Meredith, Edmund J., Philadelphia, Pa. Carbureter	Oct. 23, 1877	662	191	12	678
	Meriden Flint Glass Company. (*See* Bourne, Joseph, assignor.)					
	Meriden Malleable Iron Company, *et al.* (*See* Hull, Liverus, assignor).....(Reissue.)					
197,285	Merkt, Adolph, New York, N. Y. Leaf-turner	Nov. 20, 1877	587	174	12	861
188,395	Merrell, G. Lewis, and O. F. Soule, Syracuse, N. Y. Preserving vegetables, &c	Mar. 13, 1877	441	137	11	446
	Merrell, Lucius W. (*See* Root, Corydon A., assignor.)					
194,363	Merrens, Henry J., Cleveland, Ohio. Rubber hose	Aug. 21, 1877	605	181	12	329
	Merriam, M. H., *et al.* (*See* Turner, Charles, assignor.)					
196,469	Merrick, Clinton, Yorkville, Ill. Bed-bottom	Oct. 23, 1877	818	235	12	700
	Merrick, Edwin F., *et al.* (*See* Pfleghar, Frank P., assignor.)					
187,035	Merrick, Silas, New Brighton, Pa. Fire-place heater	Feb. 6, 1877	114	38	11	218
	Merrick, Timothy. (*See* Landfear, William R., assignor.)					
	Merrill, Albert. (*See* Crowell, James E., assignor.)					
188,063	Merrill, Chester R., assignor to self and B. S. Calef, Boston, Mass. Air-moistening apparatus	Mar. 6, 1877	102	31	11	394
198,308	Same.....Apparatus for moistening the air of an apartment	Dec. 18, 1877	629	191	12	1052
	Merrill, Freeman C. (*See* Morton, Horace J., assignor.)					
197,284	Merrill, George C., East Saginaw, and C. C. Utter, assignors to selves and C. H. Plummer, Saginaw City, Mich. Life-pump	Nov. 20, 1877	586	174	12	861
186,146	Merrill, Helem, Brooklyn, N. Y. Steam-car	Jan. 9, 1877	329	{100 101}	11	61
193,772	Same.....Duplex balanced steam-engine	July 31, 1877	1273	382	12	220
188,477	Merill, John F., Cincinnati, Ohio. Fruit-can	Mar. 20, 1877	532	164	11	467
	Merrill, John P. (*See* Berry, Scotto, assignor.)					
7,733	Merrill, Joshua, Boston, Mass. Process and apparatus for the manufacture of deodorized heavy hydrocarbon oils.....(Reissue)	June 12, 1877	536	165	11	1052
7,726	Same.....Production of deodorized heavy hydrocarbon oils.....(Reissue)	July 31, 1877	1309	392	12	225
190,233	Merrill, Llowellyn D., Sparta, Wis. Watch dust-cap	May 1, 1877	117	34	11	761
	Merrill, Richard H., *et al.* (*See* Berry, Scotto, assignor.)					
187,766	Merrill, Rufus S., Boston, Mass., assignor to H. G. Moehring, Philadelphia Pa. Lamp.	Feb. 27, 1877	863	269	11	345
194,707	Merrill, Rufus S., Boston, Mass. Picture-hook	Aug. 28, 1877	939	279	12	384
194,708	Same.....same	Aug. 28, 1877	940	279	12	384
187,721	Merrill, Thomas B., Portland, Me. Slate-pencil sharpener	Feb. 27, 1877	823	256	11	340
195,521	Merriman, Clark S., New York, N. Y. Bed-pan	Sept. 25, 1877	798	236	12	537
	Merritt, Charles H. (*See* Maydole, David, assignor.)					
189,123	Merritt, Daniel H., Marquette, Mich. Hoisting-machine	Apr. 3, 1877	97	35	11	572
196,817	Same.....Friction-gearing	Nov. 6, 1877	79	24	12	772
	Merritt, Edward. (*See* Kimball & Merritt.)					
198,657	Merritt, Henry W., Somerville, assignor of one-half interest to W. R. Stearns and W. H. Ireland, Boston, Mass. Regulated valve for carbureters	Dec. 25, 1877	981	299	12	1112
198,731	Same.....Carbureter	Dec. 25, 1877	1055	321	12	1143
	Merritt, James M., *et al.* (*See* Clarke, George, assignor.)					
7,743	Merritt, Samuel F., Springfield, Mass. Eye-glass holder.....(Reissue)	June 12, 1877	549	167	11	1053
191,989	Merritt, William H., and F. A. Eckenfels, Manistee, Mich. Towell-rack	June 12, 1877	469	144	11	1013
	Merritth, Edward. (*See* Kimball, Joseph E., assignor.)					
195,520	Merrow, Joseph M., Merrow Station, Conn. Machine for crotcheting the tops of hosiery goods	Sept. 25, 1877	795	{235 236}	12	536
197,388	Merry, Courtland D., Burgh Hill, Ohio. Mail-bag catch	Nov. 20, 1877	691	207	12	877
196,470	Merry, Samuel W., Quincy, Ill. Shuttler-worker	Oct. 23, 1877	818	235	12	700
187,034	Merserean, Daniel, Newark, N. J. Burglar-alarm	Feb. 6, 1877	113	38	11	218

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
190,232	Mershon, Aaron J., Warsaw, Ind. Rock-drilling machine	May 1, 1877	116	34	11	761
	Mershon, Albert H. (*See* Mershon, George B., assignor.)					
193,018	Mershon, George B., assignor of one-half interest to A. H. Mershon, Philadelphia, Pa. Grate	July 10, 1877	473	143	12	85
195,224	Mervesp, John J., East Newark, N. J. Horseshoe	Sept. 18, 1877	496	146	12	486
195,899	Mervesp, John J., Dobbs Ferry, N. Y. Fastening for buttons	Oct. 9, 1877	218	62	12	600
	Merwin, Hulbert & Co. (*See* Moore, Daniel, assignor.)					
	Same.....same.....(Reissue.)					
196,245	Mery, Michael L., Chico, Cal. Weighing-scoop	Oct. 16, 1877	588	170	12	659
	Mesick, George V. (*See* Monteith & Mesick.)					
191,876	Mesler, George C., Dunellen, N. J. Drain	June 12, 1877	358	110	11	1028
191,990	Messenger, Nelson, and J. Erwin, Newark, Ill. Cultivator	June 12, 1877	469	145	11	1043
	Messinger, Charles R. (*See* Smith & Messinger.)					
	Messinger, Reinhold. (*See* Weed & Messingar.)					
190,350	Messmer, Ferdinand, Saint Louis, Mo. Faucet	May 1, 1877	231	69	11	776
191,991	Metcalf, John L. and J. T., Quincy, Pa. Grain-separator	June 12, 1877	470	145	11	1043
	Metcalf, John T. (*See* Metcalf, John L. and J. T.)					
186,147	Metcalf, William J., Decatur, Ill. Safety-hook and breast-strap for harness	Jan. 9, 1877	330	101	11	61
	Metford, William E., *et al.* (*See* Farquharson, John, assignor.)					
196,032	Methvin, Boling J., Longview, Tex. Cotton and hay press	Oct. 9, 1877	356	101	12	619
189,247	Mets, Elisha, Rochester, N. Y. Burial-case	Apr. 3, 1877	216	73	11	587
191,246	Same..... Flying top	May 29, 1877	1181	355	11	934
	Mettee, Martin H., *et al.* (*See* Cline, William H., assignor.)					
	Mettler, James I. (*See* Mettler, William J. and J. I.)					
196,818	Mettler, William, Frankfort, Ill. Wheel-cultivator	Nov. 6, 1877	80	24, 25	12	772
193,019	Mettler, William J. and J. I., Mendota, Ill. Tile-laying machine	July 10, 1877	474	143	12	85
198,465	Metz, Edwin D., and M. Mäder, New Orleans, La. Frame for mosquito-nets	Dec. 25, 1877	795	241	12	1086
192,124	Metz, Julius, and E. Hinman, Denver, Colo. Fastening device for mail-bags	June 19, 1877	629	191	11	1076
189,124	Metz, Nicholas, Dayton, Ohio. Coffee-roaster	Apr. 3, 1877	98	35	11	572
	Metzger, John. (*See* Steinmann & Metzger.)					
	Metzler, B. F., *et al.* (*See* Needles, Simgesmer, assignor.)					
194,611	Metzner, Charles T., Sterling, Ill. Eave-trough hanger	Aug. 28, 1877	853	254	12	372
	Meusebach, Otto C. (*See* Coreth, Rudolph, assignor.)					
189,897	Mey, Amalie, Buffalo, N. Y. Stove-leg caster	Apr. 24, 1877	927	282	11	703
	Meyenberg, Sophia. (*See* McColl, Mary J., assignor.)					
	Meyer & Co., Henry C., *et al.* (*See* Fuller, Albert, assignor).....(Reissue.)					
	Meyer & Co., Henry C. (*See* Hall, Valentine T.).....(Reissue.)					
7,694	Meyer, Henry C., New York, N. Y. Self-closing faucet.....(Reissue)	May 22, 1877	1145	344	11	921
186,685	Same.....Double faucet for baths, &c	Jan. 30, 1877	889	275	11	162
198,547	Meyer, Herman, Toledo, Ohio. Machine for lining tubing	Dec. 25, 1877	871	265	12	1096
192,928	Meyer, Jacob, Holloway, Pa. Hog hanger and carrier	July 10, 1877	389	116	12	74
185,943	Meyer, John, Washington Court-House, Ohio. Beer-faucet	Jan. 2, 1877	135	40	11	25
189,375	Same.....Nutmeg-grater	Apr. 10, 1877	368	119	11	615
	Meyer, Justus W. (*See* Mortimer, Charles G., assignor.)					
191,009	Meyer, Karl F., Auburn, N. Y. Slate-frame attachment	May 22, 1877	142	278	11	892
192,339	Meyer, Louis, Saint Louis, Mo. Fire-escape	June 26, 1877	879	265	11	1120
197,156	Meyer, Ludwig, Berlin, Prussia. Nursing-bottle	Nov. 13, 1877	443	130	12	832
189,766	Meyerhoff, H. William, Waverly, Iowa. Corn-planter	Apr. 17, 1877	774	237	11	675
	Meyers, Emanuel. (*See* Champlin, Justin F., assignor.)					
196,920	Meyers, Henry, New York, N. Y. Cigar-box	Nov. 6, 1877	192	56	12	786
186,598	Meyers, Nicholas, assignor of one-half interest to J. P. Braner, Buffalo, N. Y. Watch-escapement	Jan. 23, 1877	798	247	11	141
195,034	Meylert, Asa P., Brooklyn, N. Y. Apparatus for drying fertilizers and other articles	Sept. 11, 1877	288	88	12	447
188,396	Meysenburg, Otto W., assignor of one-half interest to T. A. Meysenburg, Saint Louis, Mo. Welding Bessemer-steel rails	Mar. 13, 1877	443		11	446
	Meysenburg, Theodore A. (*See* Meysenburg, Otto W., assignor.)					
197,878	Michaelis, Otho E., Saint Paul, Minn. Blanket-case and shelter-tent	Dec. 4, 1877	171	52	12	970
194,454	Michaels, Moses A., McKeesport, Pa. Nursing-bottle	Aug. 21, 1877	698	208	12	341
187,662	Michel, Adam, Auburn, N. Y. Window-cornice	Feb. 20, 1877	746	231	11	321
197,389	Michelson, Sigismund M., and L. Hax, Saint Joseph, Mo. Bed-lounge	Nov. 20, 1877	693	{207 208}	12	877
193,378	Michener, William R., San Francisco, Cal. Portable steam-boiler	July 24, 1877	866	265	12	153
192,778	Michie, Theo. A., and J. W. Williams, Charlottesville, Va. Fire-escape	July 3, 1877	221	64	12	42
	Michigan Fire Alarm Company. (*See* Pond, Chester H., assignor.)					
	Michigan School Furniture Company. (*See* Beal & Clark, assignors.)					
	Michigan Stove Company. (*See* Dreyer & Barbour, assignors.)					
	Same.....(*See* Herrick, George W., assignor.)					
	Same.....(*See* Roberts, Theodore H., assignor.)					
	Mickel, P. D. (*See* Penn & Sharpneck, assignors.)					
7,551	Middleton, Allen, jr., Philadelphia, Pa. Bumper and draw-bar for railway-cars. (Reissue)	Mar. 6, 1877	268	83	11	416
190,061	Middleton, Allen, Philadelphia, Pa. Car-spring	Apr. 24, 1877	1100	334	11	726
191,361	Same.....same	May 29, 1877	1280	386	11	948
190,775	Middleton, Edward B., Charleston, S. C. Car-coupling	May 15, 1877	697	206	11	852
198,140	Middleton, William A., assignor of one-half interest to C. H. Jackson, Harrisburg, Pa. Wire fence	Dec. 11, 1877	437	132	12	1018
186,942	Might, John M., and C. W. H. Taylor, Toronto, Canada. Fountain-pen	Feb. 6, 1877	29	12	11	206
195,719	Same.....same	Oct. 2, 1877	31	9	12	565
186,050	Mihan, Patrick, Cambridgeport, Mass. Air-heater for lamp-stoves	Jan. 9, 1877	242	73	11	49
186,051	Same.....Attachment for hot-air registers	Jan. 9, 1877	242	73	11	49
186,052	Same.....Ventilator	Jan. 9, 1877	244	73	11	49
186,053	Same.....Ventilating balls, &c	Jan. 9, 1877	244	73	11	49
186,054	Same.....Ventilator	Jan. 9, 1877	245	74	11	50
186,055	Same.....Clothes-pin	Jan. 9, 1877	246	74	11	50
189,376	Same.....Ventilator	Apr. 10, 1877	369	119	11	615
194,781	Same.....Ventilator chimney-cap	Sept. 4, 1877	29	9	12	404
194,782	Same.....Apparatus for combining ærial currents	Sept. 4, 1877	30	9	12	404
195,382	Same.....Chimney	Sept. 18, 1877	648	192	12	507
195,832	Same.....Ventilator	Oct. 2, 1877	137	39	12	580
196,099	Same.....same	Oct. 16, 1877	437	127	12	638
188,749	Mikinas, Charles A., Dayton, Ohio. Convertible seat and couch	Mar. 27, 1877	799	245	11	512
	Milburn, John D., *et al.* (*See* Pollard, James M., assignor.)					
190,890	Mildren, Edward J., Black Lick, Pa. Bottom for Bessemer converters	May 15, 1877	800	237	11	866
	Miles, Benjamin B. (*See* Smith, Christopher H., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
	Miles, Charles W. (*See* Hickey & Miles.)					
194,834	Miles, George D., Cairo, Pa. Harrow	Sept. 4, 1877	77	25	12	411
188,164	Miles, John R., and H. F. Robinson, assignors to C. C. Selden, Memphis, Tenn. Cotton cleaning and straightening machine	Mar. 6, 1877	197	61	11	406
188,165	Miles, Myron, Thomas, Mich. Automatic gate	Mar. 6, 1877	199	61	11	406
188,532	Miles, Purches, New York, N. Y. Bail-ear for pails, &c	Mar. 20, 1877	581	180	11	474
193,125	Same.....Safety-pin	July 17, 1877	595	179	12	108
	Miley, Arthur E. (*See* Wall, John C., assignor.)					
	Millhiser & Co., M. (*See* Cussen, William J., assignor.)					
189,871	Milks, John, and E. H. Watson, Binghamton, N. Y. Platform-spring for vehicles	Apr. 24, 1877	897	274	11	700
	Millar, George W. (*See* Mallary, George H., assignor.)					
191,607	Millard, Jerome C., Pultneyville, N. Y. Medicine-case	June 5, 1877	89	27	11	989
193,537	Millaux, Ludovic, Waterbury, Conn. Manufacture of buttons	July 24, 1877	1020	307	12	174
193,020	Same.....Box-fastener	July 10, 1877	475	143	12	85
194,528	Millaux, Ludovic, Waterbury, Conn. Eye-shank for buttons	Aug. 28, 1877	782	232	12	361
193,126	Millen, George H., and W. Feely, Hull, Canada. Steam-boiler	July 17, 1877	595	180	12	109
	Millett, Charles W., *et al.* (*See* Kidder, George R., assignor.)					
	Miller, A. Alonzo. (*See* Miller, Emma, assignor.)					
	Miller, Aaron. (*See* Foltz & Miller.)					
197,652	Miller, Aaron H., La Porte, Ind. Stump-extractor	Nov. 27, 1877	979	291	12	927
188,064	Miller, Abraham, assignor to Hagerstown Agricultural Implement Manufacturing Company, Hagerstown, Md. Clover-huller	Mar. 6, 1877	103	31	11	394
7,483	Miller, Alfred, Cincinnati, Ohio, assignor to C. H. Waters & Co. Bail and ear for buckets (Reissue)	Jan. 30, 1877	1126	347	11	193
	Miller, Alice E. (*See* Kimball, Hiram A., assignor.)					
196,372	Miller, Andrew, Cheektowaga, N. Y. Manufacture of boots and shoes	Oct. 23, 1877	729	210	12	688
	Miller, Arthur, *et al.* (*See* Smith, Elizabeth W., assignor.)					
198,037	Miller, Augustine B., and R. P. Ludwig, Saunsville, Va. Manure-drill	Dec. 11, 1877	332	103	12	1003
	Miller, Barlow & Co. (*See* Barlow, Charles, assignor.)					
189,485	Miller, B. Davis, Vincent, Pa. Milk-cooler	Apr. 10, 1877	474	150	11	628
7,562	Miller, Benjamin F., New York, N. Y., assignor to J. Brinkerhoff. Corrugated fence-picket (Reissue)	Mar. 20, 1877	765	234	11	499
187,546	Miller, Benjamin F., Gatesville, Tex. Seed-planter	Feb. 20, 1877	634	197	11	306, 307
193,265	Miller, Benjamin F., Owensborough, Ky. Baling-press	July 17, 1877	736	245	12	127
189,248	Miller, Cassius M., assignor to B. F. Adams, Shortsville, N. Y., E. Beach, and M. A. Morse, Chicago, Ill. Carriage for portable engines	Apr. 3, 1877	217	73	11	587
194,527	Miller, Cassius M., Phelps, N. Y., assignor to E. E. Miller. Attachment for vertical steam-boilers	Aug. 28, 1877	781	232	12	361
190,887	Miller, Charles A., Marshalltown, Iowa. Claw-bar	May 15, 1877	796	236	11	866
189,870	Miller, Conrad, and J. Boldon, Pittsburg, Pa. Machine for flanging boiler-heads	Apr. 24, 1877	896	274	11	699
189,319	Miller, David, Bellevue, Pa. Washing-machine	Apr. 10, 1877	521	101	11	606
187,036	Miller, David W., Binghamton, N. Y. Washing-machine	Feb. 6, 1877	116	38	11	218
	Miller, Edgar E. (*See* Miller, Cassius M., assignor.)					
190,889	Miller, Edward, Macon City, Mo. Chain-pump bucket	May 15, 1877	799	236	11	866
	Miller, Emil, *et al.* (*See* Kast, Ernst, assignor.)					
186,148	Miller, Emma, assignor of one-half interest to A. A. Miller, Randolph, N. Y. Cooking apparatus	Jan. 9, 1877	331	101	11	61
	Miller, Frank. (*See* Waterbury & Miller.)					
193,173	Miller, Frank, Lapeer, Mich. Millstone-dressing machine	July 17, 1877	634	192	12	114
191,165	Miller, George C., Albemarle County, Va. Snap fish-hook	May 22, 1877	1084	324	11	912
193,668	Miller, George F., Jacksonville, Fla., assignor of one half interest to R. H. Chinn, Washington, D. C. Preparing the fiber of palmetto leaves for upholstering purposes.	July 31, 1877	1178		12	206
	Miller, George W. (*See* Patteson, William N., assignor.)					
196,033	Miller, Henry, Providence, R. I. Sink-trap	Oct. 9, 1877	357	101	12	619
186,864	Miller, Henry H., Newville, Pa. Combined harrow and cultivator	Jan. 30, 1877	1069	330	11	186
	Miller, Henry S. (*See* Barnard, Henry H., assignor.)					
197,524	Miller, Henry S., assignor to Henderson & Co., Philadelphia, Pa. Coasting-sled	Nov. 27, 1877	850	253	12	909
	Miller, Herman. (*See* Destony, Auguste.) (Reissue.)					
7,682	Miller, Herman, assignor, by mesne assignments, to Combined Patents Can Company, New York, N. Y. Sheet-metal can (Reissue)	May 15, 1877	868	257	11	875
190,888	Miller, Herman, New York, N. Y. Soldering-machine	May 15, 1877	797	236	11	866
192,446	Same.....Sheet-metal can	June 26, 1877	981	295	11	1134
	Miller, Isaac M. (*See* Miller, James W. and I. M.)					
	Miller, James. (*See* Gregg, John, assignor.)					
195,522	Miller, James, Bayou des Allemand, La. Apparatus for bleaching and elevating cane-juice	Sept. 25, 1877	798	236	12	537
196,691	Miller, James, Bay City, Mich., and S. Head, Millersburg, Pa.; said Head assignor to said Miller. Machine for sawing staves	Oct. 30, 1877	1056	306, 307	12	744
198,468	Miller, James, and F. C. L. G. Susemihl, Detroit, Mich., assignor of one-third interest to W. J. Watson, Chicago, Ill. Car-door	Dec. 18, 1877	726	220	12	1066
	Miller, James L. (*See* Graves, John, assignor.)					
190,351	Miller, James W. and I. M., Newark, N. J. Sleeve-buttons	May 1, 1877	232	69	11	777
193,539	Miller, James W., Scotland, Ind. Evaporating-pan	July 24, 1877	1023	308	12	174
189,125	Miller, Jeremiah, Chambersburg, Pa. Window-blind	Apr. 3, 1877	98	35	11	572
197,651	Miller, Joel, Philadelphia, Pa. Machine for forming clips on horseshoes	Nov. 27, 1877	978	291	12	927
	Miller, John, *et al.* (*See* Bourke, Thomas H., assignor.)					
191,247	Miller, John, assignor to J. Dufner, Rochester, N. Y. Boot-tree	May 29, 1877	1182	355	11	934
193,379	Miller, John, Pittsburg, Pa. Automatic fan	July 24, 1877	867	265	12	153
186,359	Miller, John C., Louisville, Ky. Riding-saddle	Jan. 16, 1877	555	169	11	96
	Miller, John E. (*See* Lynd, Andrew, assignor.)					
	Miller, John E. (*See* Lynd, Coleman T., assignor.)					
	Miller, John F. (*See* Turner, James J., assignor.)					
	Miller, John L. (*See* Buckingham, John E., assignor.)					
7,882	Miller, Jonathan, Himrod's, N. Y., assignor to Pressure Extract Company, Trenton, N. J. Making tea, coffee, and other extracts (Reissue)	Sept. 11, 1877	469	140	12	474
7,883	Same.....same (Reissue)	Sept. 11, 1877	471	140	12	474
198,658	Miller, Joseph W., and B. Coll, Baltimore, Md. Metal can	Dec. 25, 1877	982	299	12	1112
	Miller, Lewis, *et al.* (*See* Hickman, Francis, assignor.)					
	Miller, Nathan G. (*See* Thompson, Roswell, assignor.)					
	Miller, N. G. (*See* Cowles, George B., assignor.)					
	Miller, N. G. (*See* Perkins, Elihu L., assignor.)					
195,223	Miller, Niles M., Chicago, Ill. Sash-fastener	Sept. 18, 1877	497	146	12	486

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
186,599	Miller, Noah J., Ladonia, Tex. Reciprocating churn	Jan. 23, 1877	800	247	11	141
187,163	Same. Machine for washing photographs	Feb. 6, 1877	231	75	11	234
188,166	Miller, Peter G., Sycamore, Ill. Plow	Mar. 6, 1877	200	62	11	407
191,608	Miller, Peter, Chicago, Ill. Curry-comb	June 5, 1877	90	27	11	967
	Miller, Samuel. (*See* Kuhn & Miller.)					
186,056	Miller, Samuel, Lamoille, Iowa. Grain-binder	Jan. 9, 1877	247	74, 75	11	50
192,779	Same. Metallic fence-post	July 3, 1877	222	64	12	42
196,535	Same. Iron post and attachment for wire fences	Oct. 30, 1877	908	263	12	724
189,052	Miller, Samuel H., Canton, Mo., assignor of one-half interest to J. T. and R. D. Lemley, Quincy, Ill. Wagon-brake lock	Apr. 3, 1877	38	13	11	564
7,695	Miller, Samuel J., and L. Wright, Economy, assignors to F. B. Hunt, Richmond, Ind. Corn-planter (Reissue)	May 22, 1877	1147	344	11	921
	Miller, Sylvanus. (*See* Funk & Miller.)					
196,759	Miller, Thomas D, assignor of one-half interest to T. A. Shinn, Pittsburg, Pa. Utilizing mercury as a motive power	Nov. 6, 1877	24	7	12	764
186,601	Miller, Thomas M., Tyler, Tex. Plow	Jan. 23, 1877	802	247	11	141
190,062	Miller, Warren P., New York, N. Y. Saw	Apr. 24, 1877	1100	335	11	726
194,878	Miller, William, Boston, assignor of one-half interest to N. Wales and E. C. Monk, Stoughton, Mass. Last-block fastener	Sept. 4, 1877	121	37	12	417
198,207	Miller, William A. L., San Francisco, Cal. Manufacture of cabinet jewelry	Dec. 18, 1877	524	162	12	1037
188,811	Miller, William D., Springfield, Ohio. Seed-planter	Mar. 27, 1877	876	266	11	522
	Miller, William E. (*See* Crebs, Ellen, assignor.)					
	Miller, William J., *et al.* (*See* Bullock, Ephraim K., assignor.)					
	Milligan, Henry C. (*See* Ulmer, Philip, assignor) (Reissue.)					
189,250	Milligan, Henry C., assignor to Lalance & Grosjean Manufacturing Company, Brooklyn, N. Y. Sheet-metal vessel for culinary purposes	Apr. 3, 1877	219	73	11	588
190,352	Milligan, Henry C., South Orange, N. J. Dish-holder	May 1, 1877	233	69	11	777
191,703	Milligan, Henry C., South Orange, N. J., assignor to Lalance & Grosjean Manufacturing Company. Griddle	June 5, 1877	181	56	11	1001
194,709	Milligan, Henry C., Elizabeth, N. J. Sheet-metal spoon	Aug. 28, 1877	940	280	12	384
193,097	Milligan, James, Brooklyn, N. Y. Plate-printing press	July 17, 1877	569	172	12	105
187,886	Milligan, John C., South Orange, N. J., and G. Booth, Philadelphia, Pa., assignors to Lalance & Grosjean Manufacturing Company, New York, N. Y. Sheet-metal vessel	Feb. 27, 1877	986	305	11	361
197,650	Milligan, John F., assignor to J. W. Branch, Saint Louis, Mo. Cooling circular saws	Nov. 27, 1877	977	291	12	927
	Milliken, Allan C. (*See* King, Henry, assignor.)					
198,549	Milliken, Alonzo, Brooklyn, N. Y. Notch-ring for umbrellas	Dec. 25, 1877	873	266	12	1097
190,234	Milliken, George E., Los Angeles, Cal. Device for elevating earth	May 1, 1877	117	34	11	761
192,447	Millikin, William H., Baltimore, Md. Whip	June 26, 1877	982	295	11	1134
193,536	Millings, Robert C., Charleston, S. C. Thill-coupling	July 24, 1877	1020	307	12	174
193,342	Mills, Anson, United States Army. Spur	July 24, 1877	832	255	12	149
193,613	Same. Cartridge-belt	July 31, 1877	1112	334	12	198
	Mills, Clark W., *et al.* (*See* Chichester, Lewis S., assignor) (Reissue.)					
7,588	Mills, Clark W., Mont Clair, N. J. Floating grain-elevator (Reissue)	Apr. 3, 1877	277	90	11	594
195,628	Mills, James S., Strawberry Plains, Tenn. Painting-machine	Sept. 25, 1877	894	266	12	551
198,036	Mills, John H., Boston, Mass. Steam-radiator	Dec. 11, 1877	331	103	12	1003
185,946	Mills, Kelsey L., Kansas City, Mo. Water motor	Jan. 2, 1877	137	41	11	26
189,249	Same. Dental plugger	Apr. 3, 1877	218	73	11	587
	Mills, Levi W. (*See* Wagoner, Reuben, jr., assignor.)					
187,885	Mills, Marsha A., Columbia, Tenn. Quilting-frame	Feb. 27, 1877	986	305	11	361
194,164	Mills, Mortimer B., De Witt, Iowa. Feed-cooker	Aug. 14, 1877	401	120	12	294
185,945	Mills, Samuel W., Kingsville, Mo. Fly-fan	Jan. 2, 1877	136	41	11	26
192,704	Millspaugh, William, Middletown, N. Y. Corn-knife	July 3, 1877	153	43	12	34
	Millward, Frank, trustee. (*See* Donaldson, William, assignor.)					
192,272	Millward, Frank, Cincinnati, Ohio. Foot-power	June 19, 1877	786	239	11	1096
192,810	Same. Band-sawing machine	July 3, 1877	257	75, 76	12	46
198,659	Same. Roundabout	Dec. 25, 1877	982	299	12	1113
187,402	Milne, Robert D., Santa Barbara, Cal., assignor of part interest to E. Graham, W. W. Holister, J. V. Hart, H. S. Greeley, W. S. Chamberlain, E. B. Hall, D. P. Hatch, J. B. Redfield, and H. McLellan. Compensating crank	Feb. 13, 1877	481	150	11	279
198,548	Milner, William, Strathroy, Canada. Sash-balance	Dec. 25, 1877	872	262	12	1096
	Milnor, Joseph K., *et al.* (*See* Harrington, Samuel H., assignor.)					
	Milor, John H. (*See* Irons, Frank M., assignor.)					
186,211	Miltimore, Alonzo E., Janesville, Wis., and C. A. L. Totten, New London, Conn. Compensating-powder	Jan. 16, 1877	402	123	11	77
187,037	Milton, Joseph S., Bardstown, Ky. Machine for jointing staves	Feb. 6, 1877	116	38	11	218
186,487	Miltz, William L., Chicago, Ill. Head-rest	Jan. 23, 1877	694	213	11	126
	Minard, Armand P. (*See* Minard, François R. and A. P.)					
198,660	Minard, François R. and A. P., Paris, France. Candlestick	Dec. 25, 1877	982	300	12	1113
190,235	Miner, Henry, Albany, N. Y. Stove-plate	May 1, 1877	118	35	11	762
191,067	Miner, Hiram, J. D. and D. T. Seeley, Dunkirk, N. Y. Burglar-alarm	May 22, 1877	994	296	11	900
191,542	Miner, John, Detroit, Mich. Roller-skate	June 5, 1877	35	10	11	981
192,780	Same. Boot and shoe	July 3, 1877	223	64	12	42
186,488	Miner, Payson H., Rome, N. Y. Hat-holder	Jan. 23, 1877	695	213	11	126 127
	Miner, Theodore. (*See* Westcott, Adriance & Miner.)					
7,945	Minnich, Simon B., Landisville, Pa. Tobacco-press (Reissue)	Nov. 13, 1877	490	146	12	839
195,224	Minnick, Alexander P., assignor of one-half interest to J. C. Chappell, Rockford, Ill. Churn	Sept. 18, 1877	499	147	12	486
192,708	Minor, John O., and C. Woolverton, Bedford, Iowa. Plow-brightener	July 3, 1877	156	44	12	34
195,833	Minter, William H., London, Ohio. Apparatus for excavating ditches	Oct. 2, 1877	138	40	12	580
	Mitchel, I., *et al.* (*See* Warner, John P., assignor.)					
186,057	Mitchell, James C., assignor of one-half interest to C. W. Roby, Lancaster, N. H. Car-coupling	Jan. 9, 1877	249	75	11	50
188,167	Mitchell, James L., Pueblo, Colo. Car-seat	Mar. 6, 1877	200	62	11	407
188,812	Mitchell, Jonas L., Nelsonville, Ohio. Car-dumping apparatus	Mar. 27, 1877	877	266	11	522
191,010	Mitchell, Joseph P., New Bedford, Mass. Wrench	May 22, 1877	942	279	11	892
	Mitchell, Peter. (*See* Rutherford & Mitchell.)					
189,947	Mitchell, Robert., Montreal, Canada. Service-box for water-closets	Apr. 24, 1877	970	297	11	710
196,921	Mitchell, Robert, Lincoln, Nebr., assignor of one-half interest to R. W. Taylor. Harrow	Nov. 6, 1877	192	56	12	787
197,157	Mitchell, Robert L., Huntsville, Ala. Fire-place grate	Nov. 13, 1877	443	130	12	832
190,353	Mitchell, William S., Washington, D. C. Velocipede	May 1, 1877	234	69	11	777

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
197, 525	Mittinger, George, Cleveland, Ohio. Spittoon	Nov. 27, 1877	850	253	12	909
197, 390	Mix, Eldridge, Orange, N. J. Shutter-fastener	Nov. 20, 1877	694	208	12	878
186, 746	Mix, Frank W., assignor to Eagle Lock Company, Terryville, Conn. Trunk-fastener	Jan. 30, 1877	942	292	11	170
197, 787	Mix, Frank W., Terryville, Conn. Ornamenting metallic articles	Dec. 4, 1877	84	26	12	957
	Mixon, W. A., *et al.* (*See* Ray, Samuel, assignor.)					
	Moberly, George W. (*See* Henry, William, assignor.)					
187, 038	Modlin, John W., assignor to self and S. C. Gillespie, Albion, Iowa. Washing-machine	Feb. 6, 1877	117	39	11	218
	Moebring, Herman G. (*See* Merrill, Rufus S., assignor.)					
	Moeslein, Valentine. (*See* Blackburn & Moeslein.)					
188, 302	Moffatt, Elijah W., Hyde Park, Mass. Key-hole guard for locks	Mar. 13, 1877	344	108	11	432
187, 403	Moffatt, Richard R., assignor of one-third interest to C. R. Brower, Brooklyn, N. Y. Self-lighting gas-burner	Feb. 13, 1877	482	150	11	279
197, 879	Same. Gas-lighting apparatus	Dec. 4, 1877	171	52	12	970
194, 951	Moffett, Samuel H., Harrisonburg, and O. Deau, Richmond, Va. Alarm-register for use in bar-rooms, &c	Sept. 4, 1877	194	59	12	427
191, 459	Moffitt, Alexander, assignor to self and C. H. Watson, Washington, D. C. Carriage thill and pole	May 29, 1877	1375	415	11	960
190, 236	Moffitt, John A., Boston, Mass. Grate	May 1, 1877	119	35	11	762
188, 065	Mohan, John B. P., assignor of one-third interest to T. D. M. Mohan, Dryden, Minn. Car-coupling	Mar. 6, 1877	105	32	11	394
	Mohan, Thomas D. M. (*See* Mohan, John B. P., assignor.)					
	Moics, Charles. (*See* Winsor, Joseph S., assignor) (Reissue.)					
192, 707	Moir, James W., and J. H. Ellis, Halifax, Nova Scotia. Feed-regulator for millstones	July 3, 1877	155	44	12	34
189, 767	Mole, John G., Batavia, Ill. Clamp	Apr. 17, 1877	775	237	11	675
196, 923	Same. Tire-upsetter	Nov. 6, 1877	196	57	12	787
	Moline Malleable Iron Works. (*See* Snellbaker, William H. H., assignor.)					
192, 591	Molitor, John P., Vallejo, Cal. Music-leaf retainer for pianos	July 3, 1877	35	11	12	17
190, 610	Moll, Charles F., and J. H. Altheide, Quincy, Ill. Air-pump	May 8, 1877	508	151	11	821
186, 600	Molloy, Peter, Newark, N. J. Umbrella-runner	Jan. 23, 1877	801	247	11	141
189, 948	Moloney, James J., and I. S. Schuyler, Brooklyn, N. Y. Ice-box attachment for settling and cooling ale and beer	Apr. 24, 1877	971	297	11	710
	Molyneaux, Daniel M. (*See* Powell, Abraham, assignor.)					
191, 609	Monce, Samuel G., Bristol, Conn. Sash-fastener	June 5, 1877	90	28	11	989
	Moncrief, George. (*See* Dugan & Moncrief.)					
	Moncrieff, William D. S., *et al.* (*See* Casper, Edward, assignor.)					
190, 237	Monfort, Oscar F., Burlington, Iowa. Flat-iron heater	May 1, 1877	120	35	11	762
190, 776	Mongeau, Ofter, Torrington, Conn. Door-stop screw	May 15, 1877	698	206	11	853
194, 710	Mongeon, Edward A., Woonsocket, R. I. Stop-motion for railway-heads in spinning machinery	Aug. 28, 1877	941	280	12	384
	Monitor Plow Works. (*See* Ferguson, Samuel T., assignor.)					
	Monk, Elisha C., *et al.* (*See* Miller, William, assignor.)					
192, 929	Monk, Henry, Troy, N. Y. Ironing-apparatus	July 10, 1877	390	116	12	74
197, 047	Same. Ironing-machine	Nov. 13, 1877	330	97	12	815
197, 485	Monnot, Charles D., Canton, Ohio. Road engine	Nov. 27, 1877	803	240	12	902
190, 238	Monroe, James F., Fitchburg, Mass. Egg-beater	May 1, 1877	121	36	11	762
186, 041	Montague, Gurdon, Geneva, Wis. Machine for separating and cleaning wheat	Jan. 9, 1877	232	69	11	48
190, 891	Monteith, Edward P., and G. V. Mesick, Plainwell, Mich. Harness-saddle loop	May 15, 1877	800	237	11	866
197, 486	Monteith, Robert H., Eau Claire, Wis., assignor of part interest to C. H. Bigelow and H. L. Pilkington, Saint Paul, Minn., A. McVicar and D. P. Barnes, Eau Claire, Wis. Grain-separator	Nov. 27, 1877	805	240	12	903
197, 880	Montfort, Richardson, Butler, Ga. Grain-drill	Dec. 4, 1877	173	52	12	970
197, 788	Montfort, Warren, Eminence, Ky. Car-coupling	Dec. 4, 1877	85	26	12	958
186, 149	Montgomery, Archibald, Philadelphia, Pa. Spider for scale-beam	Jan. 9, 1877	332	101	11	61
187, 404	Montgomery, David C., assignor of one-half interest to Z. Montgomery, Saint Joseph, Mo. Wagon-brake	Feb. 13, 1877	484	151	11	279 and 280
193, 986	Montgomery, David C., Saint Joseph, Mo. Rein-holder	Aug. 7, 1877	187	56	12	259
	Montgomery, Edward L. (*See* Church, George A., assignor.)					
193, 538	Montgomery, Henry, Buffalo, N. Y. Rotary printing-machine for printing on boards	July 24, 1877	1021	307	12	174
192, 523	Montgomery, James M., jr., Columbus, Ohio. Combined spool-holder and pin-cushion	June 26, 1877	1060	319	11	1144
188, 813	Montgomery, John G., Sheakleyville, Pa. Churn-dasher	Mar. 27, 1877	875	266	11	522
194, 455	Montgomery, Robert, Troy, Iowa. Section-roof for sheltering grain	Aug. 21, 1877	699	208	12	341
	Montgomery, Zachariah. (*See* Montgomery, David C., assignor.)					
	Montpelier Manufacturing Company. (*See* Mackenzie, Philip W., assignor). (Reissue.)					
195, 383	Montrose, Isaac T., Peekskill, N. Y. Cooking-stove and range	Sept. 18, 1877	649	192	12	508
	Moody, Horace B. (*See* Bennett & Moody.)					
197, 789	Moody, William F., Chicago, Ill. Wire-coiling machine	Dec. 4, 1877	86	26	12	958
189, 251	Mook, Anson E., East Pembroke, N. Y. Bird-cage	Apr. 3, 1877	220	74	11	588
188, 169	Moon, Bong, San Francisco, Cal. Tobacco-press	Mar. 6, 1877	202	62	11	407
188, 397	Same. Tobacco-cutter	Mar. 13, 1877	443	137	11	446
193, 310	Moore, Aaron T., assignor of one-third interest to G. W. Glover, Cadiz, Ohio. Boot-crimper	July 17, 1877	782	240	12	133
197, 653	Moore, Alexander W. M., London, England. Furnace-grate	Nov. 27, 1877	979	292	12	927
189, 949	Moore, Aron T., assignor of one-half interest to J. L. Conwell, Cadiz, Ohio. Ice-creeper	Apr. 24, 1877	972	297	11	710
186, 943	Moore, Azariah, Shellsburg, Iowa. Apparatus for walling wells	Feb. 6, 1877	30	12	11	206
191, 068	Moore, Charles T., Renovo, Pa. Invalid-bedstead	May 22, 1877	995	296	11	900
198, 141	Moore, Columbus F., Warckland, Ind. Buckle	Dec. 11, 1877	437	137	12	1018
187, 980	Moore, Daniel, Brooklyn, N. Y. Revolving fire-arm	Mar. 6, 1877	24	6	11	384
7, 610	Moore, Daniel, Brooklyn, assignor to Merwin, Hulbert & Co., New York, N. Y. Revolving fire-arm (Reissue)	Apr. 17, 1877	839	259	11	684
190, 240	Same. same	May 1, 1877	122	36	11	762
193, 269	Same. samo	July 17, 1877	739	246	12	128
	Moore, David. (*See* Moore, Enoch and D.)					
	Moore, Edward Y. (*See* Moore, Samuel H. and E. Y.)					
198, 247	Moore, Edward Y., Chicago, Ill. Pulley-block	Dec. 18, 1877	581	176	12	1045
187, 663	Moore, Enoch and D., Vinton, Iowa. Packing for mill-spindle	Feb. 20, 1877	746	231	11	321
188, 168	Moore, Frank S., Brooklyn, N. Y. Paper box	Mar. 6, 1877	201	62	11	407
195, 629	Moore, Frederic H., Boston, Mass. Eye-glass supporter	Sept. 25, 1877	895	266	12	551
197, 487	Moore, Frederick, Trowbridge, England. Wool-drier	Nov. 27, 1877	807	241	12	903
192, 341	Moore, George F., assignor to Mousam Manufacturing Company, Kennebunk, Me. Machinery for forming boot and shoe counters	June 26, 1877	881	266	11	1121
198, 550	Same. Machine for shaping boot and shoe counters	Dec. 25, 1877	874	266	12	1097
198, 551	Moore, George F., Kennebunk, Me., and R. H. Hurlbut, Sudbury, Mass., assignors to Mousam Manufacturing Company, Kennebunk, Me. Machinery for forming counters for boots and shoes	Dec. 25, 1877	875	266	12	1097

Alphabetical list of patentees for the year 1877, *&c.*—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page
	Moore, George R. (*See* Stevens, Richard W, assignor.)					
186,265	Moore, George R., Philadelphia, Pa. Odorless receptacle	Jan. 16, 1877	449	138	11	83, 84
186,266	Same.....Odorless air-closet	Jan. 16, 1877	450	138	11	84
187,294	Moore, George R., Philadelphia, Pa. Machine for heading bolts	Feb. 13, 1877	376	120	11	265
189,054	Same.....Ventilator	Apr. 3, 1877	40	14	11	564
194,100	Same.....Water and air closet	Aug. 14, 1877	318	94	12	284
187,478	Moore, George W., assignor to M. Moore, Auburn, N. Y. Vent for barrels, &c.	Feb. 20, 1877	574	178	11	298
192,782	Moore, George W., Lynchburg, Va. Water-back for fire-place	July 3, 1877	223	65	12	42
188,750	Moore, Gilpin, assignor to Deer & Co., Moline, Ill. Colter-journal	Mar. 27, 1877	860	245	11	512
	Moore, Hollis W. (*See* Barse & Moore.)					
186,264	Moore, James E., Philadelphia, Pa. Chamber-vessel	Jan. 16, 1877	448	137	11	83
195,942	Same.....Shipping-can	Oct. 9, 1877	266	75	12	606
193,987	Moore, James L., Bridgeport, Conn. Garter	Aug. 7, 1877	188	57	12	260
187,295	Moore, John C., assignor to self and J. A. Doran, Chicago, Ill. Hame-fastener	Feb. 13, 1877	376	120	11	266
193,266	Moore, Joseph B., Philadelphia, Pa. Sewer-trap	July 17, 1877	737	245	12	128
7,754	Moore, Leonard, Coles Creek, assignor to S. E. Griscom, Pottsville, Pa. Millstone-dressing machine (Reissue)	June 19, 1877	852	258	11	1105
186,686	Same.....same	Jan. 30, 1877	890	275	11	162
	Moore Manufacturing Company. (*See* Hart, Jonathan T., assignor.)					
	Moore, Mary. (*See* Moore, George W., assignor.)					
189,569	Moore, Moses E., Westfield, Mass. Machine for fitting sidings for whips	Apr. 17, 1877	576	179	11	650
188,170	Moore, Samuel H. and E. Y., Chicago, Ill. Door-sheave	Mar. 6, 1877	203	63	11	407
189,126	Moore, Stephen, and H. Rogers, South Sudbury, Mass. Stiffener for boots and shoes	Apr. 3, 1877	99	36	11	572
194,099	Moore, Thomas, Rock Mart, Ga. Fastening for collars, cuffs, &c.	Aug. 14, 1877	318	94	12	284
186,865	Moore, William C., Cairo, Pa. Harrow	Jan. 30, 1877	1070	330	11	186
	Moore, William H. (*See* Henkle, Leonard, assignor.)					
	Moores, Henry R. (*See* Porter, John F. F., assignor.)					
193,268	Moores, Wren, Sherburne, Ky. Seed-planter	July 17, 1877	738	246	12	128
195,630	Moorhouse, James, Manchester, England. Rotary engine	Sept. 25, 1877	895	266	12	551
	Moors, Anthony. (*See* Jahne & Moors.)					
189,053	Moran, John R., assignor to W. B. Murphy, Schoharie, N. Y. Hay elevator and conveyer	Apr. 3, 1877	38	13	11	564
194,612	Morand, William J., assignor to I. S. Van Deusen & Son, Passaic, N. J. Rawhide cap for whips, &c.	Aug. 28, 1877	853	254	12	372
193,343	Morandi, Francis, Boston, Mass. Kerosene-stove	July 24, 1877	833	255	12	149
189,254	Moreau, Eugene, San Francisco, Cal., assignor to Moreau Machine Manufacturing Company. Clamp for button-hole sewing-machines	Apr. 3, 1877	222	74	11	588
	Moreau Machine Manufacturing Company. (*See* Moreau, Eugene, assignor.)					
185,866	More, Hiram, Chicago, Ill. Portable milk-strainer	Jan. 2, 1877	50	16	11	15
196,760	Same.....Potato-digger	Nov. 6, 1877	24	7	12	764
	Morehouse, Violetta. (*See* Morehouse, Charles L., assignor.)					
197,158	Morehouse, William, Buffalo, N. Y. Washing-machine	Nov. 13, 1877	444	131	12	838
197,392	Morehouse, Charles L., assignor to V. Morehouse, Cleveland, Ohio. Shoe-fastener	Nov. 20, 1877	695	208	12	878
	Morey, David B., *et al.* (*See* White, Hiram J., assignor.)					
189,570	Morey, Parker F., assignor of one-half interest to J. W. Musser, Oakland, Cal. Stench-trap	Apr. 17, 1877	577	179	11	650
195,523	Morford, James R. R., La Harpe, Ill. Shower-bath	Sept. 25, 1877	799	236	12	537
192,449	Morgan, Alfred F., assignor of two-thirds interest to C. B. Seaberry and J. A. Case, Mason City, Iowa. Reciprocating churn	June 26, 1877	984	296	11	1135
192,781	Morgan, Alvah O., Burlingame, Kans. Artificial grindstone	July 3, 1877	223	64	12	42
192,340	Morgan, Amos W., Buffalo, N. Y. Street stop-cock for gas or water	June 26, 1877	880	265	11	1121
193,827	Same.....Pipe for street gas and water stop-cock boxes	Aug. 7, 1877	31	10	12	238
192,592	Morgan, Charles H., Worcester, and J. F. Landers, Auburn; said Landers assignor to Washburn & Moen Manufacturing Company, Worcester, Mass. Iron post for wire fences	July 3, 1877	36	11	12	17
187,164	Morgan, Charles H., Worcester, Mass. Charcoal finery furnace	Feb. 6, 1877	232	76	11	234
189,771	Morgan, Curtis C., assignor to self, J. and V. Heyl, Cincinnati, Ohio. Water-filter	Apr. 17, 1877	778	239	11	675
192,448	Morgan, David, and W. Godley, Pittsburg, Pa. Flanging-machine	June 26, 1877	982	295	11	1135
	Morgan, Dayton S. (*See* Wilcox, Elihu, assignor.)					
189,898	Morgan, Elisha, Springfield, Mass. Paper box	Apr. 24, 1877	928	283	11	704
189,899	Same.....same	Apr. 24, 1877	929	283	11	704
194,970	Same.....Wall-pocket for stationery	Sept. 11, 1877	223	69	12	439
194,971	Same.....same	Sept. 11, 1877	223	69	12	439
186,150	Morgan, Evan J., Milwaukee, Wis. Millstone dress	Jan. 9, 1877	332	102	11	61
195,149	Morgan, George H., Alexandria, Va., assignor to Typographical Machine Printing Company, D. C. Type-writing machine	Sept. 11, 1877	405	121, 122	12	465
186,490	Morgan, Gerry, Andover, N. H. Device for stringing and tuning piano-fortes	Jan. 23, 1877	696	214	11	127
189,768	Same.....Device for stringing pianos	Apr. 17, 1877	775	233	11	675
195,524	Morgan, Henry G., Eau Claire, Wis. Thill-coupling	Sept. 25, 1877	800	237	12	537
195,631	Morgan, Henry W., Florence, Mass. Till-alarm	Sept. 25, 1877	897	266, 267	12	551
186,212	Morgan, James, Pittsburg, Pa. Feed apparatus for punching and other metal machines	Jan. 16, 1877	402	123	11	77
195,721	Morgan, James, Pittsburg, Pa. Adjustable templet for laying out boiler-plates	Oct. 2, 1877	32	10	12	565
198,519	Morgan, John G., Appleton, Wis. Paper-cutting machine	Dec. 25, 1877	847	253	12	1093
	Morgan, N. D. (*See* Bolling, Augustus, assignor.)					
197,391	Morgan, Richard, Johnstown, Pa. Wrought-iron fence	Nov. 20, 1877	695	208	12	878
198,409	Morgan, Richard H., Fall River, Mass. Conductor's punch	Dec. 18, 1877	727	220	12	1067
196,924	Morgan, Robert, Birmingham, England. Automatic fuel-feeder for furnaces	Nov. 6, 1877	197	57	12	787
191,069	Morgan, Stephen W., Winona, Minn. Heating-furnace	May 22, 1877	996	296	11	900
190,239	Morgan, Thomas J., Plymouth, Pa. Mining-drill	May 1, 1877	121	36	11	762
195,035	Morgan, Thomas R., Alliance, Ohio, assignor to W. D. Wood & Co., McKeesport, Pa. Sheet-metal-pan machine	Sept. 11, 1877	290	88	12	447
	Morgan, Tracy R. (*See* Parker, Abijah S., assignor.)					
7,847	Morgenstern, William, deceased, assignor, by mesne assignments, to H. W. Putnam, Bennington, Vt. Bottle-stopper (Reissue)	Aug. 14, 1877	524	158	12	310
194,427	Morgenstern, William, deceased, by E. Haeuser, administrator, New York, N. Y. Bottle-stopper	Aug. 21, 1877	669	200	12	337
194,364	Morgenthau, Lazarus, New York, N. Y. Tongue-cleaner	Aug. 21, 1877	606	182	12	329
196,161	Same.....Machine for gumming labels	Oct. 16, 1877	509	146	12	647
198,662	Same.....Paper-feeding machine	Dec. 25, 1877	986	300	12	1113
	Moritz, David. (*See* White, Wallace & Moritz.)					
	Morkill, Richard D., *et al.* (*See* Johnson, John D., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
	Morman, Henry. (*See* Davis, Horace, assignor.)					
189,127	Morong, Edward P., Boston, Mass. Cooking-stove	Apr. 3, 1877	100	36	11	572
191,248	Morong, Edwin P., Boston, Mass. Rail fastening	May 29, 1877	1183	355	11	934
198,142	Morreau, Joseph, Alpena, Mich. Shingle-saw	Dec. 11, 1877	409	137	12	1018
	Morrell, Daniel J. (*See* Smith, Charles D., assignor) (Reissue.)					
	Morret, B. F., *et al.* (*See* Hickman, Francis, assignor.)					
	Morril, Eli, *et al.* (*See* Dilg, Henry W., assignor.)					
196,471	Morrill, Nathaniel H., Lawrence, assignor of one-half interest to J. D. Elliott, Newton Center, Mass. Cloth-folding machinery	Oct. 23, 1877	819	236	12	701
196,374	Morris, Abraham, New York, N. Y. Sofa-bedstead	Oct. 23, 1877	730	210	12	688
189,252	Morris, Demey C., New Sharon, Iowa. Fence-post tip	Apr. 3, 1877	221	74	11	588
	Morris, Edward C. (*See* Glover & Morris.)					
188,398	Morris, Frederick, Norwood, N. J. Propeller for vessels	Mar. 13, 1877	444	137	11	446
188,932	Morris, George W., Pittsburg, Pa. Spring-seat for car-pedestals	Mar. 27, 1877	987	303	11	538
192,524	Same.....Car-axle-box lid	June 26, 1877	1061	320	11	1144
	Morris, G. W., *et al.* (*See* Morris, Warren L., assignor.)					
	Morris, Henry. (*See* Morris, Henry G., assignor) (Reissue.)					
7,456	Morris, Henry G., Philadelphia, Pa., assignor to H. Morris. Gas-retort-lid fastening. (Reissue)	Jan. 2, 1877	189	58	11	34
7,919	Morris, James, Liverpool, England. Machine for finishing printed paper. (Reissue)	Oct. 23, 1877	877	252, 253	12	707
196,692	Same.....Machine for finishing printed sheets of paper	Oct. 30, 1877	1057	307	12	744
	Morris, John. (*See* Westley, James, assignor.)					
	Morris, John H., executor. (*See* Hall, Valentine T.) (Reissue.)					
195,632	Morris, John H., assignor to C. Jones, Seward, Nebr. Animal-trap	Sept. 25, 1877	900	267	12	551
	Morris, Joseph A., *et al.* (*See* Shellenback, Peter, assignor.)					
	Morris, Joseph A. (*See* Craig. Robert S., assignor.)					
	Morris, J. W., *et al.* (*See* Morris, Warren L., assignor.)					
195,722	Morris, Mark B., Young America, Ind. Gage for tobacco-cutters	Oct. 2, 1877	34	10	12	565
	Morris, Tasker & Co. (*See* Douglas, John B., assignor.)					
	Same.....(*See* Munzinger, Peter, assignor.)					
193,267	Morris, Thomas S., Columbus, Ohio. Grain-drier	July 17, 1877	738	246	12	128
198,309	Morris, Warren L., assignor of one-half interest to J. W. and G. W. Morris, Victory, Ga. Machine for cutting wooden cogs	Dec. 18, 1877	630	191	12	1052
	Morris, William B. (*See* Carlton, William C., assignor.)					
193,021	Morris, William B., Collinsville, Cal. Mill-pick	July 10, 1877	475	144	12	85
	Morris, William G. (*See* Smith, John T., assignor.)					
193,418	Morris, William H. H., Franklin, Pa. Sand-pump reel	July 24, 1877	904	275	12	159
195,720	Morris, William H. H., Franklin, Pa., assignor to self, D. C. and C. H. Brawley. Bull-wheel	Oct. 2, 1877	31	10	12	565
194,836	Morris, William R., and J. Slanser, La Rue, Ohio. Frame building	Sept. 4, 1877	79	26	12	411
196,819	Morrison, Andrew J., Troy, N. Y. Twine-holder	Nov. 6, 1877	81	25	12	772
188,933	Morrison, Benjamin P., Abingdon, Va. Thill-coupling	Mar. 27, 1877	988	303	11	538
187,039	Morrison, Charles M., North Parsonsfield, Me. Stove-tongs	Feb. 6, 1877	118	39	11	218
	Morrison, Henry A. (*See* Valentine & Morrison.)					
191,166	Morrison, Horatio B., Mason City, Iowa. Hen's nest	May 22, 1877	1084	325	11	912
192,181	Same.....Stove-pipe safe and register	June 19, 1877	684	210	11	1084
7,687	Morrison, James B., Brooklyn, N. Y. Dental chair (Reissue)	May 15, 1877	874	259	11	876
189,486	Morrison, John, Pittsburg, Pa. Construction of reverberatory furnaces	Apr. 10, 1877	475	150	11	628
196,246	Same.....Reverberating-furnace	Oct. 16, 1877	589	170	12	659
198,661	Same.....same	Dec. 25, 1877	985	300	12	1113
7,580	Morrison, Joseph E., Aurora, Ill. Driven or bored well (Reissue)	Mar. 27, 1877	1079	332	11	550
	Morrison, Martin M., *et al.* (*See* Longley, Abner H., jr., assignor.)					
194,835	Morrison, William F., Plattsmouth, Nebr. Device for propelling vessels	Sept. 4, 1877	78	26	12	411
195,150	Morse, Andrew J., Boston, Mass. Hose-coupling	Sept. 11, 1877	410	122	12	465
190,892	Morse, Ben and E. F., Ithaca, N. Y. Horse hay-rake	May 15, 1877	801	237	11	866
197,561	Morse, Charles H., Rochester, and M. Sholes, Brockport, N. Y. Blacking-box	Nov. 27, 1877	886	264	12	914
	Morse, David R. (*See* Parsons, Henry F., assignor.)					
188,656	Morse, Edward P., assignor to self, G. Bowen, H. M. Warren, and H. Chaddock, Batavia, N. Y. Calendar	Mar. 20, 1877	702	215	11	490
	Morse, Everett F. (*See* Morse, Ben and E. F.)					
187,722	Morse, Gilbert A., Plantsville, assignor of one-half interest to Dalzell and Ives Wrought Box Company, New Haven, Conn. Manufacture of axle-boxes	Feb. 27, 1877	824	256	11	340
	Morse, Henry C., *et al.* (*See* Stewart, Alexander W., assignor.)					
196,988	Morse, John F., assignor of one-half interest to M. T. Battes, Oshkosh, Wis. Feed-water heater and cleanser	Nov. 13, 1877	271	80	12	806
188,171	Morse, Lucius A., Rutland, Vt. Razor-strop case	Mar. 6, 1877	204	63	11	407
	Morse, Marcellus A., *et al.* (*See* Miller, Cassius M., assignor.)					
	Morse Twist Drill and Machine Company. (*See* Stetson, George R., assignor.)					
	Morse Twist Drill Company. (*See* Stetson, George R., assignor.)					
	Morse, William V., *et al.* (*See* Davis, Edgar P., assignor.)					
	Morse, W. J. (*See* Underwood, John K., assignor.)					
185,947	Mortimer, Charles G., assignor of one-half interest to J. W. Meyer, New York, N. Y. Can-opener	Jan. 2, 1877	137	41	11	26
196,590	Mortimer, Joseph H., assignor of one-half interest to A. S. Wynn, Johnston, R. I. Stop-motion for looms	Oct. 30, 1877	960	278	12	731
189,769	Mortimer, Samuel S., and J. R. Robinson, Woonsocket, R. I. Machine for finishing horseshoe-nails	Apr. 17, 1877	776	238	11	675
	Morton, Benjamin. (*See* Spanner, Walter, assignor.)					
193,380	Morton, Henry F., Paris, Me. Boys' sled	July 24, 1877	867	266	12	154
189,638	Morton, Horace J., Norway, assignor of one-half interest to F. C. Merrill, South Paris, Me. Machine for sawing shingles	Apr. 17, 1877	640	198, 199	11	658
186,489	Morton, James G., assignor of one-half interest to T. J. Morton and J. Heither, jr., Canton, Mo. Wagon-brake lever	Jan. 23, 1877	695	213	11	127
191,362	Morton, Joseph V., Winchester, Ky. Needle-clamp for sewing-machines	May 29, 1877	1281	387	11	948
193,270	Morton, Mandred A., Chicago, Ill. Ventilating apparatus for cars	July 17, 1877	742	227	12	128
193,344	Morton, Roland A., Cardwell, Canada. Save-all for paper-makers	July 24, 1877	834	225	12	149
	Morton, Thomas J., *et al.* (*See* Morton, James G., assignor.)					
194,613	Morton, Thomas M., Baltimore, Md. Machine for damping paper	Aug. 28, 1877	854	254	12	372
189,770	Morton, William F., New Haven, Conn. Tenon-and-mortise joint	Apr. 17, 1877	777	238	11	675
191,809	Moseley, Charles H., Brooklyn, N. Y. Dental bracket	June 12, 1877	292	91	11	1020
185,867	Moseley, Charles S., Elgin, Ill. Plate for stem-winding watches	Jan. 2, 1877	51	16	11	15
	Moseley, Myron W. (*See* Corbin & Moseley.)					
189,950	Moser, Adolph, Aix la Chapelle, Prussia. Telescope	Apr. 24, 1877	972	298	11	710

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Moses, G. (*See* Blair, David F., assignor.)					
190,722	Moses, William, Buffalo, N. Y. Lubricating device for steam-engines	May 15, 1877	652	193	11	846
194,972	Mosher, Andrew J., Deering, Me. Stay for the seams of boots and shoes	Sept. 11, 1877	224	70	12	439
196,925	Mosher, Charles A., Cassopolis, Mich. Farm-gate	Nov. 6, 1877	197	57	12	787
196,989	Mosher, George D., New Hartford, Conn. Snap-hook	Nov. 13, 1877	272	80	12	806
198,143	Mosher, John W., Newton, Iowa. Churn	Dec. 11, 1877	439	137	12	1018
188,657	Mosher, Josiah H., and J. Pennington, Pewamo, Mich. Mitering-machine	Mar. 20, 1877	702	215	11	490
188,399	Mosher, Samuel E., Chillicothe, Ohio. Sand-box for locomotives	Mar. 13, 1877	445	138	11	446
194,711	Same.....Lifting-jack	Aug. 28, 1877	942	280	12	384
198,663	Moss, Benjamin F., and J. D. Abbott, assignor of one-third interest to A. M. R. Fitzsimmons, Reading, Mich. Cross-cut-saw handle	Dec. 25, 1877	987		12	1113
	Moss, John. (*See* Smith & Moss.)					
196,591	Moss, John C., New York, N. Y. Photographic camera	Oct. 30, 1877	961	279	12	731
193,174	Moss, Rufus H., Salem, Oreg. Pipe-coupling	July 17, 1877	635	192	12	115
190,777	Mosser, William F., Allentown, Pa. Bark-mill	May 15, 1877	698	206	11	853
197,790	Motheral, John, North McGregor, Iowa. Grubber and stump-extractor	Dec. 4, 1877	87	26	12	958
	Mott, Harcourt. (*See* Edmans & Mott.)					
	Mott, James D., administrator. (*See* Hermance, Charles W.)					
194,558	Mott, Thomas H., New York, N. Y. Combined clock and calendar case	Aug. 28, 1877	808	240	12	365
196,375	Same.....Calendar-clock	Oct. 23, 1877	731	{210 211	{12	688
	Mott, William H. (*See* Von Auer, William, assignor.)					
	Moulder, Garrett. (*See* Teal & Moulder.)					
192,652	Moule, Moses P., Spafford, N. Y. Bag-holder	July 3, 1877	102	29	12	26
	Moulton, Charles C. (*See* Chapin, Henry A., assignor.)					
187,405	Moulton, Claudius B., North Cambridge, Mass. Jacket	Feb. 13, 1877	484	151	11	280
187,767	Same.....Overalls	Feb. 27, 1877	864	269	11	345
189,320	Mounsdon, Robert C., Cleveland, Ohio. Draw-bridge	Apr. 10, 1877	322	101	11	608
191,070	Mountfort, Robert M., Brunswick, Me. Surge-reliever for steering apparatus	May 22, 1877	996	297	11	900
186,360	Mounts, Hugh, Hill, Pa. Vehicle-wheel	Jan. 16, 1877	555	169	11	96
	Mousam Manufacturing Company. (*See* Moore, George F., assignor.)					
	Same.....(*See* Moore & Hurlbut, assignors.)					
195,834	Moutier, John B., assignor to P. Nafziger, Cruger, Ill. Air-forcing beer-pump	Oct. 2, 1877	139	40	12	581
186,491	Mowrer, Martin L., Dayton, Ohio. Tool for dressing millstones	Jan. 23, 1877	697	214	11	127
197,159	Mowrey, Charles, Stockton, Cal. Gang-plow	Nov. 13, 1877	445	131	12	833
197,160	Same.....same	Nov. 13, 1877	446	132	12	833
	Mowry & Co., L. N. (*See* Chinnock, George H., assignor.)					
192,653	Moxham, Arthur J., Louisville, Ky. Machine for winding iron	July 3, 1877	102	30	12	26
193,540	Same.....Converting iron scrap into bars	July 24, 1877	1023	308	12	175
	Moye, John T. (*See* Black, Gideon, assignor.)					
191,771	Moyer, Charles, Trenton, N. J. Pitcher	June 12, 1877	253	80	11	1016
188,172	Moyer, David, Taberg, N. Y. Fence-post	Mar. 6, 1877	204	63	11	407
192,706	Moyer, Elias W., Burnville, Pa. Railway-gate	July 3, 1877	154	44	12	34
	Moyer, Peter, jr., *et al.* (*See* Fisher, William H., assignor.)					
195,525	Mudgett, George W., Edgartown, Mass. Shutter-fastener	Sept. 25, 1877	800	237	12	537
198,410	Mudgett, John, South Turnbridge, Vt. Hay-tedder teeth attachment	Dec. 18, 1877	728	220	12	1067
190,975	Muehle, Bernard H., Buffalo, N. Y. Propelling canal-boats	May 22, 1877	905	268	11	888
187,041	Mueller, Charles, New Britain, assignor of one-half interest to L. Leismann, West Meriden, Conn. Egg holder	Feb. 6, 1877	119	39	11	219
191,167	Mueller, Johann U., Detroit, Mich. Block for designing inlaid work	May 22, 1877	1085	325	11	912
186,602	Mueller, Robert, College Point, N. Y. Tape-loom	Jan. 23, 1877	802	248	11	{141 142
193,127	Muhleisen, Andrew, Ottawa, Ohio. Rear-bound	July 17, 1877	596	180	12	109
198,248	Same.....Ship-building	Dec. 18, 1877	581	176	12	1045
193,271	Muirhead, James, Providence, R. I. Water-closet valve	July 17, 1877	743	227	12	128
	Muldoon, George P. (*See* Thompson & Muldoon.)					
186,152	Muldrow, John E., Lynchburg, S. C. Horse-power	Jan. 9, 1877	334	102	11	61
197,791	Mulhollen, Henry C., Jasper, and D. E. Goldsmith, Mecklenburg, N. Y. Washing-machine	Dec. 4, 1877	87	27	12	958
	Mulkey, Aurelius F. (*See* Duncan, John P., assignor.)					
7,879	Mullee, William, Toughkenamon, Pa., assignor to Vulcanite Jewelry Company. Belt (Reissue)	Sept. 11, 1877	465	139	12	474
	Mullen, H. F. (*See* McCollum, William W., assignor.)					
188,934	Müller, Charles, Albany, N. Y. Cigar-machine	Mar. 27, 1877	988	303	11	538
194,102	Muller, George F., Pittsburg, Pa. Vine clamp or fastener	Aug. 14, 1877	330	95	12	285
194,101	Muller, Jean N., New Orleans, La. Portable furnace-stand	Aug. 14, 1877	319	94	12	284
191,992	Muller, Julius, and E. Hilpert, Berlin, Prussia. Clasp for books	June 12, 1877	472	145	11	1043
188,751	Muller, Louis, assignor of one-half interest to L. Muller, jr., Hartford, Conn. Drawer-pull	Mar. 27, 1877	801	245	11	513
187,040	Muller, Peter, Saint Charles, Mo. Middlings-separator	Feb. 6, 1877	118	39	11	{218 219
195,225	Mullett, Alfred B., and G. W. Baird, assignors to said Mullett, Washington, D. C. Operating ships' davits	Sept. 18, 1877	500	147	12	486
	Mulleni, William, *et al.* (*See* Smith, William H., assignor.)					
192,450	Mullin, Thomas, assignor to self and W. H. Roller, Middleburg, Iowa. Bridge	June 26, 1877	984	296	11	1135
193,988	Mulliner, Francis, Liverpool, England. Elastic wheel-tire	Aug. 7, 1877	189	57	12	260
186,151	Mullins, John W., Big Raccoon, Ky. Mechanical movement	Jan. 9, 1877	333	102	11	61
195,226	Munday, John W., Chicago, Ill. Temporary binder	Sept. 18, 1877	501	147	12	486
193,455	Munden, Isaac, Bradenville, Pa. Rotary valve for compound engines	July 24, 1877	958	285	12	164
	Mundy, Michael. (*See* Spinks, James, assignor.)					
	Munford, Morrison, *et al.* (*See* Longley, Abner H., jr., assignor.)					
	Munger, Ernest A. (*See* Carver & Munger.)					
198,664	Munger, George G., Rochester, N. Y. Lubricating compound	Dec. 25, 1877	988		12	1113
	Munger, Lyman P., *et al.* (*See* Chadwick, Charles, assignor.)					
	Munger, N. W., *et al.* (*See* Roth, Charles F., assignor.)					
	Munger, William A., *et al.* (*See* Chadwick, Charles, assignor.)					
196,592	Mungle, Alexander, Newark, N. J. Combined cane and umbrella	Oct. 30, 1877	962	279	12	732
192,076	Munn, Abraham G., C. T. Clark, and T. Brennan, Louisville, Ky. Cane-mill	June 19, 1877	583	177	11	1070
187,165	Munn, James M., Chicago, Ill. Key-fastener	Feb. 6, 1877	233	76	11	234
197,654	Munroe, James G., Wytheville, Va. Trace-fastener	Nov. 27, 1877	980	292	12	927
195,835	Munroe, Luther S., Lynnfield, Mass. Potato-bug catcher	Oct. 2, 1877	140	40	12	581
190,063	Munroe, Ralph M., Edgewater, N. Y. Manufacture of barrels	Apr. 24, 1877	1101	335	11	726
194,329	Same.....Barrel for holding volatile liquids	Aug. 28, 1877	782	232	12	361
	Munroe, Willard N. (*See* Hill, Joseph W., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Munsell, William J. (*See* Kane, John L., assignor.)					
194,103	Munson, Albert L., assignor to S. T. W. Sanford and W. Peterson, New York, N. Y. Wood-screw machine	Aug. 14, 1877	320	95, 96, 97, 98, 99, 100, 101	12	285
	Munson, Lyman. (*See* Mead, Ira W., assignor.)					
186,747	Munzinger, Peter, assignor to M. Tasker & Co. (limited), Philadelphia, Pa. Gas-purifier	Jan. 30, 1877	942	292	11	170
187,042	Same.....Gas-governor	Feb. 6, 1877	120	40	11	219
187,768	Munzinger, Peter, assignor to Morris, Tasker & Co. (limited), Philadelphia, Pa. Hinged cover for gas-retorts	Feb. 27, 1877	865	269	11	346
189,900	Same.....Automatic retort-exhauster	Apr. 24, 1877	929	283	11	704
191,877	Munzinger, Peter, assignor to Tasker & Co. (limited), Philadelphia, Pa. By-pass valve for gas-works	June 12, 1877	358	110	11	1028
192,525	Murdock, Albert L., Boston, Mass. Manufacturing corn-flours	June 26, 1877	1061		11	1144
185,948	Murdock, Friend, Centreton, Ohio. Churn	Jan. 2, 1877	138	41	11	26
192,674	Murdock, John G., Cincinnati, Ohio. Combined stop-cock and coupling	July 3, 1877	104	30	12	26
193,889	Murfey, John H., New York, N. Y. Suspender-ends	Aug. 7, 1877	89	29	12	247
194,165	Murff, Duncan L., and D. Kyle, West Station, Miss. Bee-hive	Aug. 14, 1877	402	120	12	294
195,633	Murphin, Joseph, assignor of one-half interest to A. B. Richman, Malaga, N. J. Saw-sharpening machine	Sept. 25, 1877	901	268	12	552
187,887	Murphy, Daniel H., assignor, by mesne assignments, to self and H. L. Bartlett, Plainville, and W. R. Hartigan, Burlington, Conn. Pen-holder	Feb. 27, 1877	988	306	11	361, 362
194,934	Murphy, Daniel H., Plainville, assignor to W. R. Hartigan, Burlington, Conn. Stopper for bottles, &c.	Sept. 4, 1877	168	52	12	423
198,249	Murphy, Daniel H., Lynn, Mass. Boot and shoe	Dec. 18, 1877	582	176	12	1045
189,128	Murphy, Edward B., and C. D. Bramell, South Point, Mo. Corn-guard for plows	Apr. 3, 1877	101	36	11	573
	Murphy, Hugh. (*See* Kipp & Murphy.)					
	Murphy, James D. (*See* Hulet & Murphy.)					
186,492	Murphy, John, New York, N. Y. Manufacture of riveted water-proof hose	Jan. 23, 1877	697	214	11	127
188,303	Same.....Manufacture of india-rubber hose and tubing	Mar. 13, 1877	344		11	432
198,496	Murphy, John, Brooklyn, assignor to Gutta Percha and Rubber Manufacturing Company, New York, N. Y. Vulcanized-rubber fabric for belting	Dec. 25, 1877	827	250	12	1090
198,497	Same..... Mandrel used in the manufacture of rubber hose	Dec. 25, 1877	828	251	12	1090
197,393	Murphy, John W., assignor of one-half interest to W. Webb, Baltimore, Md. Spinning-top	Nov. 20, 1877	696	209	12	878
186,866	Murphy, Merrick and R. W.; said R. W. Murphy assignor to M. F. Murphy, Saint Louis, Mo. Bag-machine	Jan. 30, 1877	1071	331	11	186
	Murphy, M. F. (*See* Murphy, Merrick and R. W., ass'gnors.)					
	Murphy, Rufus W. (*See* Murphy, Merrick and R. W.)					
198,665	Murphy, Thomas J., assignor to self and P. M. Daly, Busti, Iowa. Reciprocating churn	Dec. 25, 1877	989	301	12	1113
194,712	Murphy, Timothy W., Washington, D. C. Horseshoe	Aug. 28, 1877	943	280	12	384
	Murphy, William. (*See* Bowers & Murphy.)					
187,547	Murphy, William, Topeka, Kans. Road-scraper	Feb. 20, 1877	636	198	11	307
	Murphy, William B. (*See* Moran, John R., assignor.)					
195,836	Murphy, William B., New Bedford, Mass. Holding-device for boots and shoes	Oct. 2, 1877	141	40	12	581
195,634	Murphy, William H., assignor to J. L. Thomson, Syracuse, N. Y. Barrel-head	Sept. 25, 1877	903	268	12	552
192,384	Murphy, William T., Brooklyn, N. Y. Securing pictures	June 26, 1877	926	278	11	1127
198,144	Same.....Device for decorating vases	Dec. 11, 1877	440	137	12	1018
192,342	Murraine, Edward, Rochelle, Ill. Horseshoe	June 26, 1877	882	266	11	1121
	Murray, Charles A., *et al.* (*See* Maggi, Charles, assignor.)					
193,022	Murray, Charles E., Warren, assignor of one-half interest to W. E. Childs, Ellengowan, Md. Grate-cleaner	July 10, 1877	476	144	12	86
192,783	Murray, John D., Port Sarnia, Canada. Magazine cooking-stove	July 3, 1877	224	65	12	43
194,456	Murray, John D., Sarnia Station, Canada. Exhaust-regulator for locomotives	Aug. 21, 1877	700	209	12	341
	Murray, John S. (*See* Drake, Cornelius E., assignor.)					
186,748	Murray, Ransom P., Ashtabula, Ohio. Rein-holder	Jan. 30, 1877	943	293	11	170
196,926	Murray, Samuel W., Milton, Pa. Railway box-car	Nov. 6, 1877	199	58	12	788
193,773	Murray, William E., Ukiah, Cal. Safety-hook	July 31, 1877	1274	383	12	230
194,104	Murrell, Melville M., Panther Springs, Tenn. Aerial navigator	Aug. 14, 1877	338	101	12	286
	Marsch, Otto. (*See* Westermann & Marsch.)					
195,526	Murtaugh, James, New York, N. Y. Dumb-waiter	Sept. 25, 1877	801	237	12	537
	Munson, William S., *et al.* (*See* Hoeltge, Frederick, assignor.)					
197,161	Musgrave, James, T. F. Shillington, and J. A. Hanna, Belfast, Ireland. Stove	Nov. 13, 1877	448	132	12	833
198,411	Musgrave, James, Cincinnati, Ohio. Vapor-burner	Dec. 18, 1877	728	220	12	1067
	Musser, James W. (*See* Morey, Parker F., assignor.)					
190,507	Muth, William, Montreal, Canada. Piano-frame	May 8, 1877	413	120	11	808
191,810	Same.....Piano-forte actions	June 12, 1877	293	91	11	1021
	Myers, Abram S. (*See* Myers, Andrew G., assignor.)					
197,162	Myers, Andrew G., Dayton, assignor of one-half interest to A. S. Myers, Springfield, Ohio. Lubricator	Nov. 13, 1877	450	133	12	833
197,163	Myers, Edward, and S. R. Smith, assignors to Lane & Bodley Company, Cincinnati, Ohio. Saw-guide	Nov. 13, 1877	450	133	12	833
189,951	Myers, George S., Saint Louis, Mo. Marking plug-tobacco	Apr. 24, 1877	974	298	11	710
195,151	Same.....Manufacturing plug-tobacco	Sept. 11, 1877	411	122	12	466
	Myers, G. Lewis, *et al.* (*See* Parker, Stillma, assignor.)					
	Myers, Henry C. (*See* Kirkwood, Joseph S., assignor.)					
	Myers, Jacob H. (*See* Gordon, Myers, Telford & Hubbard.)					
187,296	Myers, Jacob H., Rochester, N. Y. Harvester-rake	Feb. 13, 1877	377	120	11	266
190,778	Same.....same	May 15, 1877	699	207	11	853
194,837	Myers, James H., Troy, N. Y. Cuff-fastener	Sept. 4, 1877	80	26	12	412
186,431	Myers, John, Nora, Ill. Washing-machine	Jan. 23, 1877	642	196	11	120
7,599	Myers, Lorenzo, Ludlowville, N. Y. Horse hay-rake	(Reissue) Apr. 10, 1877	539	168	11	637
186,487	Myers, Morris A., New York, N. Y. Heel for boots and shoes	Apr. 10, 1877	476	151	11	628
	Myers, Osborn & Co. (*See* Smith, Daniel W., assignor.)					
189,952	Myers, Samuel, Adamsborough, Ind. Fruit-drier	Apr. 24, 1877	974	298	11	710
197,562	Myers, Samuel, Adamsborough, assignor to self and W. D. Plott, Sharpsville, Ind. Fruit-drier	Nov. 27, 1877	887	264	12	914
195,768	Myers, Stephen, Saint Louis, Mo. Furniture-caster	Oct. 2, 1877	74	22	12	571

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
194,713	Myers, Teoter H., Pleasant Dale, W. Va., assignor to J. W. Painter and J. S. Veach, Strasburg, Va. Shovel-plow and cultivator	Aug. 28, 1877	944	281	12	385
	Myers, W. A. (*See* Patterson, Lemuel, assignor.)					
190,064	Myers, William J., Hartford, Conn. Bedstead	Apr. 24, 1877	1102	335	11	726
190,065	Same same	Apr. 24, 1877	1103	335	11	726
	Nace, William S. (*See* Sutherlen, Benjamin W., assignor.)					
195,036	Nadig, Henry and P., Allentown, Pa. Molding pulleys	Sept. 11, 1877	292	89	12	448
	Nadig, Phillip. (*See* Nadig, Henry and P.)					
	Naegele, Eugene. (*See* Bailey, Benjamin N., assignor.)					
	Nafziger, Peter. (*See* Montier, John B., assignor.)					
196,305	Nagel, C. Louis, Brooklyn, N. Y. Machine for embossing and perforating paper	Oct. 23, 1877	663	192	12	678
195,837	Nagle, Augustus F., Providence, R. I. Dynamometer	Oct. 2, 1877	142	41	12	581
191,704	Nagle, Samuel L., assigner of one-half interest to J. Weaver, Bernville, Pa. Wood-pressing machine	June 5, 1877	181	57	11	1001
	Nagle, Theodore M. (*See* Selden & Nagle.)					
189,055	Nagle, Theodore M., Erie, Pa. Balance slide-valve	Apr. 3, 1877	41	14	11	564
	Nailor, Washington T. (*See* Seal, William D., assignor.)					
193,541	Nale, Jesse E., Moorestown, N. J. Pumping apparatus for wells	July 24, 1877	1025	308	12	175
	Narragansett Horse Nail Company. (*See* Hall, George L., assignor.)					
191,772	Nascimento, Manvel J., Philadelphia, Pa. Hat	June 12, 1877	253	80	11	1016
192,273	Nash, Nathan E., Westerly, R. I. Steam-engine governor	June 19, 1877	786	239	11	1097
189,129	Nash, William, and E. Kempshall, New Britain, Conn. Snap-hook	Apr. 3, 1877	101	36	11	573
195,635	Nason, George, Newport, R. I. Folding ironing-table	Sept. 25, 1877	903	269	12	552
	National Hat Pouncing Machine Company. (*See* Wheeler & Manley, assignors). (Reissue.)					
	National Tube Works Company. (*See* Adams, Manning J., assignor.)					
186,361	Natvel, Theodore C., San Francisco, Cal. Portable fire-place	Jan. 16, 1877	556	169	11	96
	Nau, Charles. (*See* Eisenbeis & Nau.)					
188,814	Naulty, William H., Little Rock, Ark. Advertising-frame	Mar. 27, 1877	879	267	11	522
196,306	Same Temporary binder	Oct. 23, 1877	665	192	12	678
	Nauman, William H. (*See* Pryor, Edward F., assignor.)					
186,605	Naumann, Henry, Basle, Switzerland. Preparing extract of meat	Jan. 23, 1877	806		11	142
193,718	Nauss, Michael B., Goldsborough, Pa. Washing-machine	July 31, 1877	1219	365	12	212
	Nave, Columbus, *et al.* (*See* Drake, Merritt V., assignor.)					
	Nave, Joseph S., *et al.* (*See* Drake, Merritt V., assignor.)					
196,927	Naylor, James, jr., Rochester, N. Y. Barrel-machine	Nov. 6, 1877	200	58	12	788
197,391	Naylor, James, jr., Rochester, N. Y., and P. Vollmar, Seaforth, Canada. Stove-jointing machine	Nov. 20, 1877	697	209	12	878
191,363	Naylor, Joseph, New York, N. Y. Attaching knobs to spindles	May 29, 1877	1281	387	11	948
7,507	Naylor, Kinzey C., New Sharon, assignor of one-half interest to B. L. Cook, Ottumwa, Iowa. Nut-lock (Reissue)	Feb. 13, 1877	541	166	11	286
190,154	Neab, Conrad, Indianapolis, Ind. Water-governor	May 1, 1877	44	12	11	752
195,152	Neal, Thomas H., Allegheny, Pa. Attaching tools to handles	Sept. 11, 1877	412	122	12	466
189,377	Neale, Robert, Brooklyn, N. Y. Device for wiping and polishing engraved plates	Apr. 10, 1877	370	119	11	615
195,636	Neall, James F., Philadelphia, Pa. Valve for hydrants	Sept. 25, 1877	904	269	12	552
	Neally, Edward H. (*See* Curtis, Andrew J., assignor.)					
195,300	Neally, George, assignor to self and C. W. Bloomingdale, New York, N. Y. Smoke-excluding mask	Sept. 18, 1877	574	167	12	496
186,749	Nealon, Martin J., T. Higgins, and W. Knott, Chester, Pa. Bolster and step	Jan. 30, 1877	944	293	11	170
192,655	Nealon, Martin J., and T. Higgins, Chester, Pa. Bobbin holder and bobbin for slubbing and fly frames	July 3, 1877	106	30	12	26
195,769	Neasham, Robert, Pittsburg, Pa. Tool-post for lathes	Oct. 2, 1877	75	22	12	572
194,499	Nebinger, George R., Philadelphia, Pa. Car wheel and axle	Aug. 21, 1877	742	221	12	347
188,935	Neddo, Paul, and F. H. Walton, Alton, Me. Lamp-extinguisher	Mar. 27, 1877	989	304	11	538
7,953	Needham, Elias P., New York, N. Y., assignor of one-half interest to U. Pratt, Deep River, Conn. Piano and organ key (Reissue)	Nov. 13, 1877	504	148	12	840
191,460	Needham, Elias P., New York, N. Y. Automatic wind instrument	May 29, 1877	1376	415	11	960
197,048	Same Automatic musical instrument	Nov. 13, 1877	331	98	12	816
187,043	Needham, Franklin M., Rockford, Ill. Wheel-cultivator	Feb. 6, 1877	121	40	11	219
	Needham, George E. (*See* Powers & Needham.)					
190,241	Needles, Simgesmer, assignor to I. Nichols and B. F. Metzler, Holden, Mo. Combined spirit-lamp and blow-pipe	May 1, 1877	123	37	11	762
192,705	Needles, Simgesmer, assignor of one-half interest to W. M. Coventry, Holden, Mo. Washing-machine	July 3, 1877	154	43	17	34
187,888	Neff, Andrew Z., Amsterdam, N. Y. Clasp for attaching straps to horse-blankets	Feb. 27, 1877	988	306	11	362
	Neff, Edwin W. (*See* Schonacker, John E., assignor.)					
197,395	Neff, Peter, Gambier, Ohio. Machinery for making lamp-black	Nov. 20, 1877	698	209	12	878
	Neher, Abraham C. (*See* Brewster & Neher.)					
186,946	Neider, Fred. A., Madison, Ind. Frame for carriage-lights	Feb. 6, 1877	33	13	11	206
195,637	Neider, Fred A., Augusta, Ky. Loop for carriage-tops	Sept. 25, 1877	905	269	12	552
187,548	Neighbour, William W., Chicago, Ill. Paper fruit-box	Feb. 20, 1877	637	198	11	307
	Neil, James. (*See* Batley, Keats & Neil.)					
197,049	Neil, John, Chicago, Ill. Beer-pump	Nov. 13, 1877	333	98	12	816
197,526	Neill, George W., Boston, Mass. Upright-piano action	Nov. 27, 1877	851	253	12	909
190,976	Neill, John, Saint Joseph, Mo. Gate-latch	May 22, 1877	907	268	11	888
193,642	Neilson, George, Chelsea, Mass. Nut-lock	Apr. 17, 1877	642	200	11	659
7,543	Neimeyer, Jacob, Hamilton, Ohio, assignor to Wheeler, Madden & Clemsen Manufacturing Company. Crosscut-saw handle (Reissue)	Feb. 27, 1877	1069	330	11	372
198,145	Neis, Sebastian, Sublette, Ill. Churn	Dec. 11, 1877	441	138	12	1019
	Neisser, Bruno A. (*See* Marsh, Elon A., assignor.)					
186,153	Nellis, Aaron J., Pittsburg, Pa. Fence	Jan. 9, 1877	335	102	11	61
186,362	Nellis, Aaron J., and D. C. Guttridge, Pittsburg, Pa. Iron fence	Jan. 16, 1877	557	169, 170	11	96
187,723	Nellis, Aaron J., Pittsburg, Pa. Barbed fence	Feb. 27, 1877	825	257	11	340
191,011	Same Fence-barb	May 22, 1877	943	279	11	893
191,993	Same Barbed fence	June 12, 1877	473	146	11	1043
195,723	Same Fence-post	Oct. 2, 1877	34	10	12	565
196,307	Same Mold for casting steel	Oct. 23, 1877	666	192	12	679
193,989	Nelon, Michael D., Newport, Ky. Screw-propeller	Aug. 7, 1877	190	57	12	260
198,666	Nelon, Michael D., assignor of one-half interest to S. L. Yourtree, Cincinnati, Ohio. Draft attachment for vehicles	Dec. 25, 1877	990	301	12	1114
	Nelson, Charles E. (*See* Teal & Nelson.)					
197,792	Nelson, David A., assignor to self and S. A. Cain, Tyler, Tex. Combination hoe	Dec. 4, 1877	88	27	12	958
	Nelson, Henry. (*See* Stingley & Nelson.)					
	Nelson, James R. (*See* Aitken, Andrew, assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Nelson, Maurice. (*See* Pie & Nelson.)					
	Nelson, Nels J. (*See* Peterson, Andrew A., assignor.)					
193,828	Nelson, Nels P., assignor of one-half interest to A. S., S., and T. Piper, Chicago, Ill. Clearing-teeth for ice-plows	Aug. 7, 1877	31	10	12	238
	Nelson, Peter M. (*See* Ellis & Nelson.)					
7,716	Nelson, Richard L., Orange Court-House, Va. Coffee-pot (Reissue)	May 29, 1877	1455	437	11	968
188,025	Same same	Mar. 6, 1877	68	19	11	389
189,253	Same same	Apr. 3, 1877	222	74	11	588
192,593	Same same	July 3, 1877	37	11	12	17
192,274	Nelson, William H., Salem, Mass. Steering apparatus	June 19, 1877	787	239	11	1097
	Neptune Fog Horn Company. (*See* Sweanor, George, assignor.)					
7,600	Noracher, William, Cleveland, Ohio, assignor of one-half interest to H. B. Piper. Combined key and knob fastener (Reissue)	Apr. 10, 1877	540	168	11	637
191,461	Noracher, William, assignor of one-half interest to H. B. Piper, Cleveland, Ohio. Automatic hose-reel	May 29, 1877	1377	416	11	960
191,168	Nesbitt, James, Prairie Ronde, Mich. Windmill	May 22, 1877	1087	325	11	912
186,042	Nesmith, Milton W., Metamora, Ill. Grain-register	Jan. 9, 1877	234	70	11	48
186,363	Nesmith, Robert D., Johnstown, Pa. Machine for fulling and scouring cloth	Jan. 16, 1877	558	170	11	96
189,130	Neubert, Herman, Ironton, Ohio. Corn-sheller	Apr. 3, 1877	102	57	11	573
	Neumann & Co., R. (*See* Flocke, Robert, assignor.)					
	Same (*See* Suhr, Emil, assignor.)					
185,832	Neumann, Robert, Konigsberg, Prussia. Burglar-proof safe	Jan. 2, 1877	19	6	11	11
196,603	Neustadter, David, San Francisco, Cal. Overalls	Oct. 30, 1877	1058	307	12	745
198,667	Novegold, Frederick, Bristol, Pa. Machine for rolling hand or hoop iron	Dec. 25, 1877	991	301	12	1114
196,922	Nevill, George W., assignor of one-half interest to J. B. McKay, Caverna, and W. Beard, Munfordsville, Ky. Ditching-machine	Nov. 6, 1877	194	56	12	787
185,949	Neville, Michael, Boston, Mass. Plaiting-machine	Jan. 2, 1877	139	42	11	26
195,527	Nevin, Robert E., Enon Valley, Pa. Ditching and tile-laying machine	Sept. 25, 1877	801	237	12	537
197,655	Nevins, David D., Attleborough Falls, Mass. Ornamental chain	Nov. 27, 1877	981	292	12	923
7,920	New, Tobias, Brooklyn, N. Y. Water proof cellar (Reissue)	Oct. 23, 1877	878	253	12	707
195,376	New, Tobias, New York, N. Y. Vent for gases under cellar-bottoms	Oct. 23, 1877	734	211	12	688
188,936	Newall, George E., assignor of one-half interest to S. N. Andrus, Flint, Mich. Pressure-bar for planing-machines	Mar. 27, 1877	990	304	11	538
194,106	Newbrough, Abel, Madisonville, Ky. Gate-latch	Aug. 14, 1877	403	120	12	294
193,175	Newbury, Alonzo, assignor to B. F. Eaton, Coxsackie, N. Y. Paper-holder	July 17, 1877	636	193	12	115
	Newbury, Lyman M. (*See* Thistlewood, Thomas, assignor) (Reissue.)					
	Newby, Stanford. (*See* Tatlock & Newby.)					
	Newcomb, Augustus E. (*See* Petrie, Margaret, assignor.)					
196,247	Newcomb, Lucius S., Utica, N. Y. Needle-setter for sewing-machines	Oct. 16, 1877	589	171	12	659
193,774	Newell, Darius C., Yonkers, N. Y. Safety-trap for chip-carriers in wood-working machinery	July 31, 1877	1275	383	12	230
196,100	Same Grinding-mill	Oct. 16, 1877	438	128	12	639
195,153	Newell, John A., and A. Lucasse, Kalamazoo, Mich. Seating foot-valves in pumps	Sept. 11, 1877	413	123	12	466
191,994	Newell, John G., assignor of one-half interest to L. G. Currier, New Haven, Conn. Latch-bolt lock	June 12, 1877	473	146	11	1044
	Newell, Nelson C., *et al.* (*See* Kellogg, Charles H., assignor.)					
	Newell, Samuel R., *et al.* (*See* Kellogg, Charles H., assignor.)					
	Newell, William H. (*See* Harworth & Newell.)					
191,773	Newell, William H., Philadelphia, Pa. Injector	June 12, 1877	254	80	11	1016
	New England Wardrobe Bedstead Manufacturing Company. (*See* Caulier, Frederick, assignor.)					
	New England Wardrobe Bedstead Company. (*See* Caulier, Frederick, assignor.) (Reissue.)					
	New Haven Folding Chair Company. (*See* Dann, Isaac N., assignor.)					
	Newhouse, Casey. (*See* Gruwell & Newhouse.)					
189,872	Newhouse, Frederick, and M. H. Allen, Toledo, Ohio. Machine for making parquetry	Apr. 24, 1877	898	274, 275, 276	11	700
189,643	Newhouse, Henry, Oakland, Cal. Tide-power	Apr. 17, 1877	643	200	11	659
	New Jersey Manufacturing Company. (*See* Radcliffe, Charles, assignor.)					
196,162	Newkirk, Abram, Cleveland, Ohio. Apparatus for steaming food for stock	Oct. 16, 1877	501	146	12	647
	Newlands, Benjamin E. R. (*See* Duncan & Newlands.)					
192,182	Newman, Carlton, San Francisco, Cal. Demijohn-case	June 19, 1877	685	210	11	1084
	Newman, Robert G. (*See* Hand, Ekins, assignor.)					
186,867	Newman, William B., Pittsville, Mo. Sulky-plow	Jan. 30, 1877	1072	331	11	186
194,457	Newsam, George A., Brooklyn, N. Y. Fruit-press	Aug. 21, 1877	701	209	12	342
	Newsom, John J. (*See* Reed, Hoagland & Newsom) (Reissue.)					
196,377	Newsom, John J., San Francisco, Cal. Lazy-back for vehicle-seats	Oct. 23, 1877	735	211	12	688
	Newton, Edward M. (*See* Wallace, James G., assignor.)					
	Newton, George. (*See* Carpenter, James H., assignor.)					
194,105	Newton, George, Saint Louis, Mo. Chronometer-regulator	Aug. 14, 1877	339	101	12	286
196,536	Newton, Madison, Kentland, Ind. Vehicle-spring brace	Oct. 30, 1877	909	263	12	724
196,537	Same Check-rower	Oct. 30, 1877	910	263, 264	12	724
186,154	Newton, Stephen S., Binghamton, N. Y. Strainer for faucets	Jan. 9, 1877	335	103	11	62
186,364	Same Oiler	Jan. 16, 1877	559	170	11	97
186,750	Same Cup	Jan. 30, 1877	945	293	11	171
187,409	Same Lamp	Feb. 13, 1877	488	152	11	280
188,658	Same Oiler-nozzle	Mar. 20, 1877	703	216	11	490
188,659	Same Mucilage-holder	Mar. 20, 1877	704	216	11	491
189,131	Same Lamp	Apr. 3, 1877	102	37	11	573
193,023	Same Stopper for mucilage-holders	July 10, 1877	477	144	12	86
193,024	Same same	July 10, 1877	477	144	12	86
193,025	Same same	July 10, 1877	479	145	12	86
193,381	Same Bottle for holding liquid blacking	July 24, 1877	868	266	12	154
195,227	Same Lamp	Sept. 18, 1877	501	147	12	486
188,066	Newton, William A., Poppinville, Mo. Post and pile driver	Mar. 6, 1877	105	32	11	395
	New York Cording and Sealing Company. (*See* Hamilton, Fred. C., assignor.)					
	New York Ore-Separator Company. (*See* Hooper, William, assignor.)					
	Same (*See* Porter, Francis, assignor.)					
	Same (*See* Trumbull, Horace, assignor.)					
	New York Valve and Faucet Company. (*See* Boyle, James E., assignor.)					
	Neymann, Emil H. (*See* Houer, Friedrich W., assignor.)					
	Nichaolds, Locratus C. (*See* Sanders & Nichaolds.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
7,871	Nichols, Albert T., Williamsport, Pa. Circular-sawing machine (Reissue)..	Sept. 4, 1877	200	61	12	427
197,050	Nichols, Barak T., Hastings-on-the-Hudson, N. Y. Truss	Nov. 13, 1877	334	98	12	816
	Nichols, Charles M., jr., *et al.* (*See* Cheney & Butterfield, assignors.)					
192,594	Nichols, Clarence W., Chicago, Ill. Treating feathers	July 3, 1877	38	11	12	17
	Nichols, George H., *et al.* (*See* Chichester, Lewis S., assignor) (Reissue.)					
188,815	Nichols, Henry W., Northfield, Ind. Cultivator	Mar. 27, 1877	880	267	11	523
	Nichols, I., *et al.* (*See* Needles, Simgesmer, assignor.)					
	Nichols, Jacob J. (*See* Greenough, Benjamin F., assignor.)					
196,035	Nichols, James H., Boston, Mass. Harness	Oct. 9, 1877	358	102	12	619
187,406	Nichols, John A., Pittsburg, Pa. Fruit-jar	Feb. 13, 1877	485	151	11	280
193,272	Same.....Nut-lock	July 17, 1877	744	227	12	129
198,069	Nichols, John A., and J. W. Livingston, Syracuse, N. Y. Gun-lock	Dec. 25, 1877	992	302	12	1114
198,070	Same.....Hinge-joint for breech-loading guns	Dec. 25, 1877	993	302	12	1114
193,720	Nichols, John C., Atlanta, Ga. Service-pipe filter	July 31, 1877	1220	366	12	212
197,942	Nichols, Moses, Newburg, N. Y. Retort for making gunpowder charcoal	Dec. 11, 1877	241	74, 75	12	989
195,638	Nichols, Samuel C., assignor to self and T. B. Paxton, Cincinnati, Ohio. Stone-drilling machine	Sept. 25, 1877	905	269	12	552
186,015	Nichols, William, Maywood, Ill. Revolving scraper	Jan. 9, 1877	207	63	11	45
196,034	Nichols, William A., Evans' Mills, N. Y. Toilet-case	Oct. 9, 1877	358	102	12	619
187,297	Nichols, William D., Batavia, Ill. Windmill	Feb. 13, 1877	380	{ 120 121	} 11	266
195,154	Nichols, William E., East Haddam, Conn. Ring-spinning frame	Sept. 11, 1877	413	123	12	466
190,242	Nichols, William H., East Hampton, Conn. Bell	May 1, 1877	123	37	11	762
187,769	Nichols, William T., Chicago, Ill. Rotary harrow	Feb. 27, 1877	666	270	11	346
	Nichols, William W. (*See* Webster, Orville F., assignor.)					
	Nicholson Tile Company. (*See* Nicholson, William T., assignor.)					
	Nicholson, Francis H., *et al.* (*See* Redmond, Charles C., assignor.)					
	Nicholson, George E. (*See* Cave and Nicholson.)					
196,248	Nicholson, Henry C., Kenton, Ky., assignor to Western Union Telegraph Company, New York, N. Y. Quadruplex telegraph	Oct. 16, 1877	590	171	12	660
195,037	Nicholson, Thomas, Philadelphia, Pa. Musical toy	Sept. 11, 1877	293	89	12	448
193,719	Nicholson, William I., Paola, Kans. Corn-planter	July 31, 1877	1220	366	12	212
187,298	Nicholson, William T., assignor to Nicholson File Company, Providence, R. I. File ..	Feb. 13, 1877	381	121	11	266
191,811	Same.....File-holder	June 12, 1877	294	91	11	1021
198,668	Same.....Butchers' steel	Dec. 25, 1877	992	301	12	1114
	Nickel, Adam. (*See* Wessell, Nickel & Gross.)					
187,299	Nickerson, Edward, and J. K. Blanchard, Lynn, Mass.; said Blanchard assignor to said Nickerson. Plaiting-machine	Feb. 13, 1877	383	121	11	266
	Nickerson, Fred. A. (*See* Carroll, Thomas J., assignor.)					
186,947	Nickerson, Ziba, South Carver, Mass. Bail for cast-metal hollow-ware	Feb. 6, 1877	34	13	11	206
	Nicol, James. (*See* Crompton, Nicol & Hawley.)					
	Nicoll, Charles H. (*See* Koegler & Nicoll.)					
185,950	Nicolls, Willoughby H., Barton Township, Ontario, Canada. Registering ballot-box ...	Jan. 2, 1877	139	42	11	26
191,543	Nicols, Parshall D., Pittsburg, Pa. Construction of reverberatory-furnace bottoms ...	June 5, 1877	36	10	11	981
189,953	Niebell, Charles A., assignor to self and P. Franz, Scranton, Pa. Combined center and carrier for lathes	Apr. 24, 1877	975	298	11	710
7,779	Niedringhaus, Frederick G. and W. F., Saint Louis, Mo. Manufacture of enameled iron-ware (Reissue)..	July 3, 1877	268		12	48
186,432	Same.....Attaching spouts and strainers	Jan. 23, 1877	643	197	11	120
186,433	Same.....Attaching lips and strainers	Jan. 23, 1877	644	197	11	120
189,378	Same.....Attaching handles	Apr. 10, 1877	371	120	11	615
189,639	Same.....Hinge of vessels of enameled iron-ware	Apr. 17, 1877	641	199	11	658
189,640	Same.....Spout and strainer	Apr. 17, 1877	641	199	11	658
189,641	Same.....same	Apr. 17, 1877	642	199	11	659
190,155	Same.....Lip and strainer	May 1, 1877	44	13	11	752
190,243	Same.....Joint of vessels of enameled sheet-iron ware	May 1, 1877	124	37	11	763
192,784	Niedringhaus, Frederick G. and W. F., Saint Louis, Mo., assignors to Saint Louis Stamping Company. Sheet-metal vessel-handle	July 3, 1877	225	65	12	43
	Niedringhaus, William F. (*See* Niedringhaus, Frederick G., and W. F.) (Reissue.)					
193,669	Niedringhaus, William F., Saint Louis, Mo. Enameling sheet-iron ware	July 31, 1877	1179		12	266
	Niegelsen, E. N., *et al.* (*See* Green, William W., assignor.)					
	Niemeyer, Adolph, *et al.* (*See* Winkler, Gustavus R., assignor.)					
192,343	Niles, Milton C. and S. S., Oak Park, Ill. Knob-latch	June 26, 1877	882	266	11	1121
192,344	Niles, Milton C. and S. S., Chicago, Ill. Knob-latch	June 26, 1877	884	266	11	1121
	Niles, Sidney S. (*See* Niles Milton C. and S. S.)					
187,889	Niles, Milton C., Chicago, Ill. Knob-latch	Feb. 27, 1877	989	306	11	362
190,066	Nilson, Nils, Minneapolis, Minn. Mechanical movement	Apr. 24, 1877	1104	336	11	726
190,067	Same.....Rotary engine	Apr. 24, 1877	1105	336	11	726
	Nippes, John C. (*See* Warren & Nippes.)					
191,995	Nirdlinger, Albert H., assignor to Stein Manufacturing Company, Rochester, N. Y. Burial-casket	June 12, 1877	474	146	11	1044
194,330	Same.....same	Aug. 28, 1877	783	232	12	361
195,155	Niver, Christian W., Port Royal, S. C. Insect-destroying device	Sept. 11, 1877	415	123	12	466
190,508	Niver, John, Sherman, N. Y. Boot-jack	May 8, 1877	414	120	11	808
195,770	Nivois, Victor, New York, N. Y. Shoe-fastener	Oct. 2, 1877	75	23	12	572
195,038	Nix, John D., assignor of two-thirds interest to W. D. Tabb, and G. M. Haynes, Mount Vernon, Ill. Harvester	Sept. 11, 1877	294	89, 90	12	448
189,056	Nixon, Charles A., Dayton, Ohio. Paper-bag machine	Apr. 3, 1877	42	14, 15	11	565
198,671	Nixon, Martin, Philadelphia, Pa., apparatus for recovering alkalines from waste solutions	Dec. 25, 1877	994	302	12	1114
	Nixon, William P. (*See* Scott, Walter, assignor.)					
195,384	Nober, Julius A., Parker City, Pa. Hone	Sept. 18, 1877	650	193	12	508
	Noble, George. (*See* Weaver & Noble.)					
192,079	Noble, Henry, Boston, Mass. Spirally-wound sheet-metal tubes	June 19, 1877	585	178	11	1071
197,881	Noble, Jay, assignor of one-half interest to W. R. Allen, I. C. and A. O. Terry, Saint Louis, Mo. Steam street-car	Dec. 4, 1877	173	52	12	970
	Noble, Theo. F., *et al.* (*See* Teed, Lorenzo P., assignor.)					
	Noblitt, David J., *et al.* (*See* Bell, James H., assignor.)					
	Same (*See* Medearis, John T., assignor.)					
195,943	Nobs, Charles, Newark, N. J. Combined sole and toe protector for boots and shoes	Oct. 9, 1877	267	75	12	606
191,364	Nolan, John H., and B. Fitzpatrick, Chambers County, Ala. Transplanter and fertilizer	May 29, 1877	1282	387	11	948
193,098	Nolan, John H., Boston, Mass. Velocipede	July 17, 1877	571	172	12	105
186,604	Nolan Mary, Saint Louis, Mo. Building-block	Jan. 23, 1877	805	249	11	142

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
188,060	Nolan, Mary, Saint Louis, Mo. Artificial-stone composition	Mar. 20, 1877	704		11	491
196,036	Nolan Patrick W., assignor to H. F. Palmer, New York, N. Y. Opera-chair	Oct. 9, 1877	359	103	12	630
	Nold, Lydia. (*See* Haas, Philip M., assignor.)					
197,056	Noll, Conrad, Newark, N. J. Satchel	Nov. 27, 1877	981	293	12	928
	Nolte, John F. (*See* Tittle & Nolte.)					
7,038	Norcross, Alvin C., Boston, Mass. Regulator for hot-air furnaces (Reissue)	Apr. 24, 1877	1177	336	11	726
190,354	Same. Automatic draft-regulator for steam-boilers, &c	May 1, 1877	235	70	11	777
189,773	Norcross, Joseph W., Boston, Mass. Tackle-block	Apr. 17, 1877	780	{239 240}	11	676
189,774	Same same	Apr. 17, 1877	781	240	11	676
189,321	Norcross, William H. H., Boston, Mass. Target for shooting-galleries	Apr. 10, 1877	322	101	11	608
191,250	Nordmann, Max, jr., Boston, Mass. Rotary engine	May 29, 1877	1185	{355 356}	11	935
192,710	Norman, Charles D., Ames, Iowa. Car-coupling	July 3, 1877	157	45	12	34
	Norman, Henry. (*See* Haehnel, Frederic, assignor.)					
189,772	Norman, James, Springfield, Mo. Mill-pick	Apr. 17, 1877	779	239	11	675
195,385	Norris, Daniel W., Elgin, Ill. Encased glass vessel	Sept. 18, 1877	651	193	12	508
193,273	Norris, William R., Fort Ann, assignor to J. W. Sutton, New York, N. Y. Material for pulley-covers	July 17, 1877	745	228	12	129
193,543	Nortemann, Ernst, assignor to R. F. Simmons & Co., Attleborough Falls, Mass. Ornamental chain-link	July 24, 1877	1027	309	12	175
	North & Co., O. B. (*See* North, Oliver B., assignor.)					
	Same (*See* Steele, Elbridge J., assignor.)					
	North American Fire Annihilator Company. (*See* Hughes, Alexander E., assignor.)					
	North American Ice Company. (*See* Rankin, Thomas L., assignor.)					
	North, Anna M. (*See* North, William C., assignor.)					
194,714	North, Leonard H., Chicago, Ill. Railway-frog	Aug. 28, 1877	945	281	12	385
186,155	North, Oliver B., assignor to O. B. North & Co., New Haven, Conn. Wrench	Jan. 7, 1877	336	103	11	62
193,721	North, Selden G., and A. M. Norton, Higganum, Conn. Lathe-dog	July 31, 1877	1221	366	12	212
	Northwestern Iron Fence Company. (*See* Frederick, Benjamin T., assignor.)					
197,396	North, William, Sheepridge, near Huddersfield, England. Bottle-stopper fastener	Nov. 20, 1877	699	210	12	879
186,213	North, William C., assignor to J. E. Hall and A. M. North, Cleveland, Ohio. Vapor-burner	Jan. 16, 1877	404	124	11	77
194,106	North, William C., assignor to A. M. North, Cleveland, Ohio. Gasoline-stove	Aug. 14, 1877	341	102	12	286
	Norton, Aurelius M. (*See* North & Norton.)					
188,026	Norton, Edwin, Chicago, Ill. Paint-can	Mar. 6, 1877	69	20	11	389
195,301	Same. Canister	Sept. 18, 1877	575	167	12	496
197,164	Same. Spice-caddy	Nov. 13, 1877	452	133	12	834
	Norton, E. L., *et al.* (*See* Turner, Charles, assignor.)					
198,038	Norton, Elenora A., New Bedford, Mass. Rack attachment for pianos, organs, &c	Dec. 11, 1877	333	103	12	1003
187,167	Norton, Franklin B., Worcester, Mass. Grinding and polishing surfaces and wheels	Feb. 6, 1877	235	76	11	234
193,542	Norton, James, Hightstown, N. J. Potato-digger	July 24, 1877	1026	308	12	175
	Norton, Jotham P. (*See* Gerald, Amos F., assignor.)					
	Norton, Lewis C. (*See* Delano & Norton.)					
	Norton, Samuel E., *et al.* (*See* Spoor, Stephen, assignor) (Reissue.)					
186,603	Norwood, Frederick, Gloucester, Mass. Boom and sail attachment	Jan. 23, 1877	804	249	11	142
195,944	Nott, Henry J., Saint Mary's, Tex. Sewing-machine shuttle	Oct. 9, 1877	267	75	12	606
186,267	Nott, J. V. Henry, New York, N. Y. Letter-scales	Jan. 16, 1877	451	138	11	84
194,257	Nourse, Joel, Boston, Mass. Plow	Aug. 14, 1877	484	446	12	306
	Novelty Paper Box Company. (*See* Heyl & Brohmer, assignors.)					
	Same (See Heyl, Henry R., assignor) (Reissue.)					
187,724	Nowell, Timothy, Indianapolis, Ind. Extension curtain-roller	Feb. 27, 1877	825	257	11	341
197,657	Noyes, Charles C. and D. W., Boston, Mass. Scarf	Nov. 27, 1877	982	293	12	928
	Noyes, David W. (*See* Noyes, Charles C. and D. W.)					
	Noyes, E. S., *et al.* (*See* Noyes, George H., assignor.)					
	Noyes, George E. (*See* Gray & Noyes.)					
190,355	Noyes, George E., assignor to self and E. N. Gray, Washington, D. C. Combined adjustable engine and screw propellers	May 1, 1877	236	70	11	777
192,785	Noyes, George E., assignor of one-half interest to E. N. Gray, Washington, D. C. Driving-gear for street-cars	July 3, 1877	226	66	12	43
192,786	Noyes, George H., Erie, Pa. Boiler-flue scraper	July 3, 1877	227	66	12	43
195,724	Noyes, George H., assignor of two-thirds interest to E. S. and P. W. Noyes, Erie, Pa. Lock-cock	Oct. 2, 1877	55	11	12	565
187,166	Noyes, Henry F., Boston, Mass. Carpet-sweeper	Feb. 6, 1877	234	76	11	234
	Noyes, Poison. (*See* Kidder, Moses W., assignor.)					
	Noyes, P. W., *et al.* (*See* Noyes, George H., assignor.)					
194,458	Noyes, Walter B., Charlestown, Mass. Curtain-fixture	Aug. 21, 1877	703	209	12	342
186,944	Nudd, William H., Minneapolis, Minn. Machine for making wooden eaves-troughs	Feb. 6, 1877	31	12	11	206
7,834	Nugent, Richard C., Dayton, Ohio, assignor, by mesne assignments, to Phillips, Nimick & Co., Pittsburg, Pa. Machine for forming flanges on boiler-heads (Reissue)	Aug. 7, 1877	232	69	12	265
193,775	Nugent, William, New York, N. Y. Water-filter	July 31, 1877	1275	383	12	220
	Null, Isaiah. (*See* Curtis, James, assignor.)					
197,832	Nunamacker, By., Earlham, Iowa. Safety-pocket	Dec. 4, 1877	174	53	12	971
187,549	Nutting, Calvin and C., jr., San Francisco, Cal. Metal wheelbarrow	Feb. 20, 1877	637	198	11	307
191,169	Nutting, Freeman E., Florence, Mass. Game apparatus	May 22, 1877	1088	336	11	912
	Nutting, Harmon D. (*See* Schuyler, George D., assignor.)					
197,853	Nutting, Thomas B., and D. U. Graveline, Byron, Ill. Car-coupling	Dec. 4, 1877	175	53	12	971
	Nuttman, James E., *et al.* (*See* Skinner & Bonnet, assignors) (Reissue.)					
186,751	Nutze, Henry K., Philadelphia, Pa. Helmet-light	Jan. 30, 1877	945	293	11	171
188,067	Nye, George H., Chicago, Ill. Valve for steam-vacuum pumps	Mar. 6, 1877	106	32	11	395
189,132	Nysewander, Daniel, Springfield, Ohio. Windmill	Apr. 3, 1877	103	37	11	573
183,027	Oak, Nathaniel, Exeter, Me. Barrel-carrier	Mar. 6, 1877	70	20	11	389
196,761	Same. Corkscrew and extractor combined	Nov. 6, 1877	25	7	12	764
191,614	Oakford, Charles, Philadelphia, Pa. Toy-target	Aug. 28, 1877	855	255	12	372
190,689	Oakford, Isaac R., assignor to S. L. Garrett, Philadelphia, Pa. Car-brake	May 15, 1877	613	182	11	841
187,725	Oakman, Samuel, Winchester, Mass. Molding glass	Feb. 27, 1877	826	257	11	341
	Oakville Company. (*See* Bronson, I. Hobart, assignor.)					
191,544	Oberg, Nils P., Warren, Pa. Tobacco-pipe	June 5, 1877	36	11	11	981
187,550	Oberholtzer, Jacob W., Hiawatha, Kans. Strainer-cup	Feb. 20, 1877	639	198	11	307
195,528	Oberholtzer, Jacob W., and C. E. Wilcox, Hiawatha, Kans. Dropping attachment for corn-planters	Sept. 25, 1877	803	238	12	538
194,715	Oberndorfer, Abram, Norfolk, Va. Lock for valises, &c	Aug. 28, 1877	946	281	12	385
197,527	Obertrifer, William, Gardenville, N. Y. Shaft-tug	Nov. 27, 1877	851	254	12	909

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Ir'g.	Official Gazette. Vol.	Official Gazette. Page.
	O'Brien, John. (*See* Rouze, Ledford & O'Brien.)					
190,356	O'Brien, Nicholas, Branford, Conn. Reversible knob-latch	May 1, 1877	217	70	11	777
187,890	O'Bryan, Terrence, Barnard, Mo. Gun-carriage	Feb. 27, 1877	991	306	11	362
186,606	O'Callaghan, John D., Chattanooga, Tenn. Combined wheelbarrow and garden-cultivator	Jan. 23, 1877	807	249	11	142
	Ochs, Frederick. (*See* Bonaventure, Edmund F., assignor.)					
	Same. (*See* Hubbell & Ochs.)					
197,658	Ochsner, Anton, New Haven, Conn. Pipe tongs and cutter	Nov. 27, 1877	982	293	12	928
187,407	O'Connor, Michael, assignor to A. Betterly, Sparta Center, Mich. Coffee-filter	Feb. 13, 1877	486	151	11	280
190,893	O'Connor, Patrick, and J. J. Dinnan, New Haven, Conn. Spring air-gun	May 15, 1877	802	237	11	867
195,838	O'Dell, Charles A., assignor of one-half interest to J. F. Richardson, Jamestown, Mich. Hay rake and loader	Oct. 2, 1877	144	41	12	581
185,951	Odell, Josiah, Franklin, Pa. Heater for oil-wells	Jan. 2, 1877	141	42	11	27
190,068	Odenbaugh, Frank, Springfield, Ohio. Picture-frame	Apr. 24, 1877	1106	336, 337	11	727
187,551	O'Donnell, Anthony, Saint Clair, Pa. Lasting apparatus for boots and shoes	Feb. 20, 1877	639	189	11	307
	Oechs, Anthony. (*See* Hubbell & Ochs, assignors.)					
197,488	Oesterle, Johann, G., Franciscoville, Mich. Washing-machine	Nov. 27, 1877	808	241	12	903
189,873	Ofeldt, Frank W., assignor to self and C. C. Coats, Newark, N. J. Gas-machine	Apr. 24, 1877	901	176	11	760
	O'Ferrall & Co., John. (*See* Clark & Purcell, assignors.)					
186,945	Ogborn, Harrison, Richmond, assignor to S. Watson, Dublin, Ind. Hog-trap	Feb. 6, 1877	31	12, 13	11	206
188,478	Ogborn, Harrison, Richmond, Ind., and T. T. Kendrick, New York, N. Y. Spring bed-bottom	Mar. 20, 1877	533	164	11	467
	Ogden, Frederick. (*See* Tullock, James, assignor)	(Reissue.)				
187,408	Ogden, Henry, Providence, R. I. Ventilated water-closet bowl	Feb. 13, 1877	487	152	11	280
196,928	Same. Overflow and discharge valve for wash-bowls, tubs, baths, &c.	Nov. 6, 1877	202	59	12	788
	Ogden, Russell R. (*See* Stearns & Ogden.)					
187,981	Ogg, Philip M., Port Jervis, N. Y. Knife and fork polisher	Mar. 6, 1877	25	7	11	384
186,868	Ogle, Henry C., and D. M. Robison, Shelby County, Mo.; said Robison assignor to said Ogle. Farm-fence	Jan. 30, 1877	1074	332	11	136
198,383	O'Hanlon, Joseph, Elkhorn, assignor of one-half interest to H. B. Hays, Pittsburg, Pa. Coal-tipple for loading boats	Dec. 18, 1877	702	213	12	1063
189,644	Ohaver, William A., Monmouth, Ill. Swinging gate	Apr. 17, 1877	643	200	11	659
194,949	Okell, George B., Chicago, Ill. Preparing plug-tobacco	Sept. 4, 1877	193	59	12	426
195,688	Same. Marking plug-tobacco	Sept. 25, 1877	952	284	12	559
194,716	O'Kelly, Edward B., Boston, Mass. Pipe-tongs or wrench	Aug. 28, 1877	948	282	12	385
7,493	Old, James, assignor, by mesne assignments, to M. J. Old, Allegheny, Pa. Joint and coupling for pipes, &c	(Reissue.) Feb. 6, 1877	284	93	11	240
7,673	Old, James, Pittsburgh, Pa., assignor, by mesne assignments, to M. J. Old. Pipe-coupling	(Reissue.) May 8, 1877	585	173	11	830
187,891	Old, James, Allegheny, Pa. Furnace for brick-kilns	Feb. 27, 1877	992	307	11	362
	Old, Martha J. (*See* Old, James, assignor)	(Reissue.)				
188,400	Oldershaw, John B., Baltimore, Md. Air-heating stove	Mar. 13, 1877	446	138	11	446
196,694	Oldfield, Edwin, Norwich, Conn. Loom	Oct. 30, 1877	1058	307, 308	12	745
	Olds, Charles W. (*See* Olds, Francis A. and C. W.)					
198,208	Olds, Francis A. and C. W., Martinsville, Ind. Saw-mill guide	Dec. 18, 1877	525	162	12	1037
198,498	Olds, Philo G., Elyria, Ohio. Toe-weight for horses	Dec. 25, 1877	829	251	12	1090
190,569	Olfit, Reuben B., New Berlin, Pa. Bee-hiving apparatus	May 8, 1877	414	121	11	808
188,173	Oley, Charles H., Brooklyn, N. Y. Refrigerator	Mar. 6, 1877	205	63, 64	11	407
	Olfs, Joseph. (*See* Jakel, Ferdinand, assignor.)					
	Olin, Edwin D. (*See* Daly, William F., assignor.)					
198,466	Olin, Edwin R., New York, N. Y. Refrigerator	Dec. 25, 1877	795	242	12	1086
195,156	Olin, William F., Chicago, Ill. Harvester-elevator	Sept. 11, 1877	416	123	12	466
187,664	Oliver, Allen, Forest Hill, Cal. Quartz-mill	Feb. 20, 1877	747	231	11	321
	Oliver, Charles L. (*See* Hull, Charles, assignor.)					
187,893	Oliver, Ebenezer, New York, N. Y. Tea-pot	Feb. 27, 1877	994	307	11	362
196,472	Oliver, George W. P., and T. A. Wiles, Evening Shade, Ark. Fence	Oct. 23, 1877	820	236	12	701
194,838	Oliver, Henry L., assignor of one-half interest to E. S. Holmes, Washington, D. C. Mold-wheel for brick-machines	Sept. 4, 1877	80	26, 27	12	412
	Oliver, James. (*See* McNutt & Furman, assignors)	(Reissue.)				
185,833	Oliver, James, South Bend, Ind. Plow	Jan. 2, 1877	19	6	11	11
189,874	Same. Chilling for casting mold-boards for plows	Apr. 24, 1877	903	276	11	700
190,510	Same. Colter or jointer supporter for plows	May 8, 1877	415	121	11	808
	Oliver, John S. (*See* Parsson & Oliver.)					
190,977	Oliver, Joseph G., Philadelphia, Pa. Machine for molding clay tobacco-pipes	May 22, 1877	908	269	11	888
	Olmesdahl, August. (*See* Keller & Olmesdahl.)					
190,244	Olmstead, Richard H., Napa City, Cal. Urinal for invalids	May 1, 1877	124	37	11	763
196,125	Olmsted, John W., and B. R. Ketcham, Northport, N. Y. Tool-holder	Oct. 16, 1877	470	136	12	643
188,533	Olmsted, Leverett H., Brooklyn, N. Y. Lamp	Mar. 20, 1877	582	180	11	474
190,069	Same. same	Apr. 24, 1877	1107	337	11	727
190,894	Same. same	May 15, 1877	804	238	11	867
195,725	Same. same	Oct. 2, 1877	36	11	12	506
196,762	Same. same	Nov. 6, 1877	26	7	12	764
197,165	Same. same	Nov. 13, 1877	452	133	12	834
191,996	Olmsted, Oliver A., Santa Rosa, Cal. Cultivator	June 12, 1877	475	146	11	1044
187,892	Olney, Sanford P., Detroit, Mich. Spring bed-bottom	Feb. 27, 1877	993	307	11	362
188,534	Olsen, Jens, and K. N. Thuesen, Emmetsburg, Iowa. Pump	Mar. 20, 1877	583	180	11	474
	Olsen, Rasmus. (*See* Larsen & Olsen.)					
190,070	Olson, John A., Vasa, Minn. Plow	Apr. 24, 1877	1108	337	11	727
192,183	Onderdonk, Lansing, Adams' Station, N. Y. Gathering and plaiting attachment for sewing-machines	June 19, 1877	686	210, 211	11	1024
187,665	Oneal, Charles W., Shop Spring, Tenn. Plow-coupling for double shovels	Feb. 20, 1877	749	232	11	321
188,661	O'Neall, James M., Fort Worth, Tex. Convertible wagon-bed and hay-rack	Mar. 20, 1877	705	216	11	491
192,275	Same. Wagon-hay rake	June 19, 1877	788	240	11	1097
197,659	Same. Band-cutting-feeder for thrashing-machines	Nov. 27, 1877	983	293	12	928
186,434	O'Neil, John, New York, N. Y. Machine for sewing straw braid	Jan. 23, 1877	645	197	11	120
7,913	O'Neill, Andrew, Ansonia, Conn., assignor to S. A. Cotter. Preparing sheet-copper for boilers and other vessels	(Reissue.) Oct. 16, 1877	631		12	665
190,071	O'Neill, Andrew, Ansonia, Conn. Preparing sheet zinc	Apr. 24, 1877	1109	337	11	727
188,068	O'Neill, Charles Z., assignor to H. S. Williams and E. B. Stillings, Boston, Mass. Newspaper-file	Mar. 6, 1877	107	32	11	395
190,245	O'Neill, Eugene, Oakland, Cal. Valve motion and cut-off	May 1, 1877	125	38	11	763
191,812	O'Neil, Eugene, San Francisco, Cal. Engine-valve	June 12, 1877	296	91, 92	11	1021

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
193,026	O'Neill, Hugh, assignor of one-half interest to J. Ritterband, New York, N. Y. Machine for punching and shearing metal	July 10, 1877	480	145	12	86
197,397	O'Neill, J. Palmer, Pittsburg, Pa. Target-sheet	Nov. 20, 1877	700	210	12	879
197,398	Same..... Target for testing penetration of shot	Nov. 20, 1877	701	210	12	879
197,793	O'Neill, Patrick, Murfreesborough, Tenn. Machine for filing gin-saws	Dec. 4, 1877	89	27	12	958
	O'Neill, Thomas, *et al.* (*See* Thompson, Charles H., assignor.)					
197,489	Onslow, Charles, Port Ewen, N. Y. Platform weighing-scales	Nov. 27, 1877	809	241	12	903
189,775	Oothout, William, assignor to self and G. L. Kelty, Brooklyn, N. Y. Warp-regulator	Apr. 17, 1877	782	240	11	676
	Oothout, William N., *et al.* (*See* Palmer, Aaron, assignor.)					
190,779	Opp, Henry, Belleville, Ill. Plow	May 15, 1877	701	207	11	853
195,386	Oppelt, Edmund J., Baltimore, Md. Apparatus for coloring tobacco-leaves	Sept. 18, 1877	652	193	12	508
188,255	Oppenheim, Frederick, San Francisco, Cal. Extensible wagon-body	Mar. 13, 1877	297	94	11	426
196,820	Same.....Vehicle-spring	Nov. 6, 1877	81	25	12	772
196,821	Same.....Vehicle-seat	Nov. 6, 1877	82	25	12	772
190,403	Oppenheimer, Simon, Washington, D. C. Eye-glass	May 1, 1877	291	86	11	764
194,559	Oppmann, Andrew W., Cleveland, Ohio. Apparatus for mashing	Aug. 28, 1877	808	240	12	365
185,952	Oram, Henry, Bury, Great Britain. Sewing-machine for quilting	Jan. 2, 1877	142	43	11	27
186,493	Ord, William, Brooklyn, Ohio. Circulating device for steam-boilers	Jan. 23, 1877	698	214	11	127
186,494	Same.....Water-tube and circulating steam-boiler	Jan. 23, 1877	699	215	11	127
	Orff, John. (*See* Cookson & Rastetter, assignors.)					
186,869	Orff, John, J. C. Cookson, and L. Rastetter, Fort Wayne, Ind. Millstone-dressing machine	Jan. 30, 1877	1074	332	11	186
189,379	Orm, John, Paducah, Ky. Log-turner for saw-mills	Apr. 10, 1877	371	120	11	615
191,774	Ormsby, Robert H., Milwaukee, Wis. Opera-chair	June 12, 1877	255	80	11	1016
186,607	Orr, James, Leavenworth County, Kans. Horse hay-fork	Jan. 23, 1877	808	249	11	142
	Orr, James K., *et al.* (*See* Sloan, James D., assignor.)					
	Orr, Joseph. (*See* Orr, William T., assignor.)					
194,258	Orr, William T., assignor to J. Orr, Kewanee, Ill. Sulky-plow	Aug. 14, 1877	485	146	12	306
190,072	Ort, Jacob, Champaign, Ill. Station-indicator	Apr. 24, 1877	1112	338	11	727
188,401	Ortel, George, Baltimore, Md. Stump-extractor	Mar. 13, 1877	447	138	11	447
197,166	Ortmans, Victor C. J., Brussels, Belgium. Rotary pump	Nov. 13, 1877	453	134	12	834
193,419	Orton, Chauncey M., Glens Falls, N. Y. Animal-trap	July 24, 1877	905	276	12	159
193,128	Orton, Thomas, Chicago, Ill. Temporary binder	July 17, 1877	597	180	12	109
	Orwig, Thomas G. (*See* Dippert, William E., assignor.)					
	Osberghaus, Charles. (*See* Kolb & Osberghaus.)					
196,822	Osborn, Ambrose A., San Francisco, Cal. Clutch for shaft-couplings	Nov. 6, 1877	83	26	12	773
187,666	Osborn, Bennet, Newark, N. J. Paper box	Feb. 20, 1877	750	232	11	321
187,895	Same.....same	Feb. 27, 1877	996	308	11	362
197,225	Osborn, Byron E., Throopville, N. Y. Combined seed-drill, cultivator, harrow, &c.	Nov. 20, 1877	530	156, 157	12	853
187,300	Osborn, George R., East Orange, N. J., and B. A. Drayton, New York, N. Y. Iron table-stand	Feb. 13, 1877	383	121	11	266
190,511	Same.....Waiter call or signal	May 8, 1877	416	121	11	808
186,058	Osborn, George W., Parkville, Mich. Grain-drill	Jan. 9, 1877	250	75	11	50
	Osborn, Henry. (*See* Allen James A., assignor.)					
189,488	Osborn, Jos., and J. P. Lybarger, Delphos, Ohio. Turbine water-wheel	Apr. 10, 1877	477	151	11	628
	Osborn, Lewis A. (*See* Johnson, James H., assignor.)					
	Osborn, Martin. (*See* Henson & Osborn.)					
186,687	Osborn, Milo, Cleveland, Ohio. Draw-bar for street-cars	Jan. 30, 1877	891	275	11	162
187,552	Same.....Tire-tightener	Feb. 20, 1877	639	199	11	307
194,926	Osborn, William F., Burlington, Kans. Brake-lever	Sept. 4, 1877	171	53	12	423
	Osborne & Cheeseman Company. (*See* Splann, John, assignor.)					
197,943	Osborne, Edwin, Philadelphia, Pa. Artificial limb	Dec. 11, 1877	242	75	12	989
189,255	Osborne, Eugene F., assignor to J. H. Edward, St. Paul, Minn. Grain-separator	Apr. 3, 1877	223	75	11	588
187,896	Osborne, Henry F., Newark, N. J., assignor to Champion Belt Hook Company, New York, N. Y. Hand-punch	Feb. 27, 1877	996	308	11	363
186,495	Osborne, John O., Chicago, Ill. Railway-car heater	Jan. 23, 1877	760	215	11	127
191,045	Osborne, John W., Washington, D. C. Urinal	June 12, 1877	530	163	11	105
194,717	Osborne, Richard B., New Castle County, Del. Suspension-bridge	Aug. 28, 1877	948	282	12	385
197,286	Same.....Truss-bridge	Nov. 20, 1877	588	174	12	861
190,246	Osenbruck, Johannes A., Hemelingen, near Bremen, German Empire. Railway-wheel	May 1, 1877	126	38	11	763
191,610	Osgood, Bennett, Lenox, Iowa. Corn-harvester	June 5, 1877	91	28	11	989
197,167	Osgood, Charles M., Amherst, Mass. Machine for trimming hat-brims	Nov. 13, 1877	456	134	12	834
195,387	Osgood, Franklyn R., Codillac, Mich. Extension-table	Sept. 18, 1877	653	194	12	508
	Osgood, James M. (*See* Osgood, Herman D., assignor.)					
187,894	Osgood, Herman D., assignor of one-half interest to J. M. Osgood, Somerville, Mass. Window-screen	Feb. 27, 1877	995	308	11	362
196,378	Osgood, Ralph R., Troy, N. Y. Dredging-machine	Oct. 23, 1877	735	212	12	688
188,256	Osgood, Robert T., Orland, Mo. Clutch for jib-sheet travelers	Mar. 13, 1877	298	94	11	426
190,611	Same.....Protractor	May 8, 1877	569	151	11	821
	Osgoodby, George M. (*See* Rowell, Benning, assignor.)					
	Osman, William H., jr. (*See* Clark, John, assignor.)					
193,456	Osmond, Edmund, Cincinnati, Ohio. Dental drill	July 24, 1877	939	285	12	161
191,907	Osterm[illegible]or, Henry D., Brooklyn, N. Y. Drier	June 12, 1877	476	147	11	1014
186,683	Ostrander, David R., Fountain Green, Ill. Fence	Jan. 30, 1877	892	276	11	162
193,274	Ostrander, David R., Fountain Green, Ill. Fence	July 17, 1877	746	228	12	129
188,662	Ostrander, William R., New York, N. Y. Portable furnace for thawing leaders	Mar. 20, 1877	706	216	11	491
7,936	O'Thayne, Patrick, New York, N. Y. Ironing-machine (Reissue)	Nov. 6, 1877	237	71	12	793
7,937	Same.....same (Reissue)	Nov. 6, 1877	238	71	12	793
190,444	Same.....Ironing apparatus	May 8, 1877	346	101	11	800
190,445	Same.....same	May 8, 1877	347	101, 102	11	800
197,884	Same.....Ironing-machine	Dec. 4, 1877	176	53	12	971
	Otis Bros. & Co. (*See* Schmidt, Rudolph, assignor.)					
	Otis, Norton P. (*See* See, Alonzo B., assignor.)					
191,705	Otis, Norton P., assignor to R. Dutton & Co., Yonkers, N. Y. Oscillating gearing	June 5, 1877	1[illegible]2	57	11	1001
193,027	Otis, Norton P., Yonkers, N. Y. Hoisting-machine	July 10, 1877	481	145	12	86
188,937	Otis, Samuel G., Springfield, Mass. Plaiting-board	Mar. 27, 1877	991	304	11	538
191,249	Otley, Samuel, Grand Haven, Mich. Cement for steam joints	May 29, 1877	1104		11	934
191,071	O'Toole, Edward F., Saint Louis, Mo. Coal-hod	May 22, 1877	997	297	11	900
186,608	Ott, William, Saint Louis, Mo. Sofa-bedstead	Jan. 23, 1877	809	250	11	142
	Ottenheimer, Louis. (*See* Ottenheimer, Moses and L.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
196,929	Ottenheimer, Moses and L., Baltimore, Md. Preserving meat	Nov. 6, 1877	803		12	788
190,612	Otterson, Thomas G., Philadelphia, Pa. Fruit-jar	May 8, 1877	510	152	11	821
	Otto, Carl, jr., *et al.* *See* Heuser, Max, assignor.)					
187,410	Otto, Gustav, Jersey City, N. J., and T. Simon, New York, N. Y. Draft attachment for vehicle	Feb. 13, 1877	488	152	11	280
186,943	Otto, Henry, Bloomington, Ill. Lawn-mower	Feb. 6, 1877	34	13	11	206, 207
195,771	Otto, J. H. Ferdinand, Reedsville, Wis. Piston-packing	Oct. 2, 1877	76	23	12	572
194,047	Otto, Nicolaus A., Deutz, Germany. Gas-motor engine	Aug. 14, 1877	266	79, 80	12	278
196,473	Otto, Nicolaus A., Deutz, Germany, and F. W. and W. J. Crossley, Manchester, England. Gas-motor engine	Oct. 23, 1877	821	236, 237, 238	12	701
195,839	Ough, William, B. L. Lloyd, and J. Johnson, Atkinson, Ill. Harrow-coupling	Oct. 2, 1877	145	41	12	581
198,209	Outerbridge, Alexander E., jr., Philadelphia, Pa. Manufacture of metallic leaf	Dec. 18, 1877	525		12	1034
191,366	Ontson, Jacob P., Racine, Wis. Wagon-brake lever	May 29, 1877	1284	388	11	948
	Outterson, James T. (*See* Taylor & Outterson.)					
	Over, Ewald. (*See* Greenleaf, William A., assignor.)					
194,259	Overhiser, David R., Williamsport, Pa. Spreader for wood-sawing machines	Aug. 14, 1877	487	147	12	306
189,954	Overin, George P., New York, N. Y. Whip	Apr. 24, 1877	976	299	11	710
193,544	Overmyer, John B., and J. A. Huston, New Lexington, Ohio. Time-lock	July 24, 1877	1028	309	12	175
198,039	Overshiner, James, M. Elwood, and T. Shannon, Anderson, Ind. Washing-machine	Dec. 11, 1877	335	104	12	1004
185,953	Overstreet, Joseph C., Pleasant Plains, Ark. Blower	Jan. 2, 1877	143	43	11	27
186,689	Owen, Benjamin, Dayton, Ohio. Horse hay-rake	Jan. 30, 1877	892	276	11	162
	Owen, Charles D., executor. (*See* Brown, Joseph R.)					
189,489	Owen, Charles E., Trenton, Mich. Metallic hub	Apr. 10, 1877	478	151	11	628, 629
194,531	Owen, John H., Huston, Ill. Cultivator-blade	Aug. 28, 1877	784	233	12	362
195,040	Owen, Joseph R. N., Hamilton, Nev. Projectile for smooth-bore cannon	Sept. 11, 1877	297	90	12	448
188,663	Owen, William B., and Elias J. McClintock, East Saginaw, Mich. Thill-coupling	Mar. 20, 1877	707	217	11	491
197,287	Owens, Bernard, Saint Louis, Mo. Mechanical movement	Nov. 20, 1877	590	175	12	862
193,614	Owens, John L., Cambria, assignor to G. Esterly; said Esterly assignor of one-fourth interest to G. W. Esterly, Whitewater, Wis. Harvester	July 31, 1877	1113	334	12	198
	Owens, Samuel. (*See* Mann & Owens.)					
195,039	Owens, Thomas, United States Navy. Ventilator	Sept. 11, 1877	296	90	12	448
	Ownbey, W. M., *et al.* (*See* Starnes, John H., assignor.)					
187,776	Pabst, Charles, Philadelphia, Pa. Wardrobe-bedstead	Apr. 17, 1877	783	240, 241	11	676
192,711	Same.....same	July 3, 1877	158	45	12	34
185,868	Pabst, Hermann G. O., Chicago, Ill. Feather-renovator	Jan. 2, 1877	52	16	11	15
198,499	Pack, William H., Philadelphia, Pa. Fire-escape	Dec. 25, 1877	820	251	12	1090
193,028	Packard, Charles F., Brockton, Mass. Leather-skiving machine	July 10, 1877	483	146	12	86
	Packard, William P. (*See* Kingsley & Packard.)					
188,174	Packer, Edmund W., Paulsborough, N. J. Spinning-top	Mar. 6, 1877	206	64	11	497
188,940	Packscher, Adolph, San Francisco, Cal. Drawers	Mar. 27, 1877	994	305	11	539
	Padberg, Francis. (*See* Hummel & Padberg.)					
196,163	Padgett, William B., Batesville, Ark. Adjustable rowlock	Oct. 16, 1877	502	146	12	648
193,990	Pae, James A., Montgomery, Ala. Spark-arrester and conveyer	Aug. 7, 1877	191	57, 58	12	260
193,275	Pagan, Orestes, Philadelphia, Pa. Tube-expander for boilers	July 17, 1877	746	228	12	129
189,380	Page, Clark D., Rochester, N. Y. Hydraulic engine	Apr. 10, 1877	372	120	11	616
	Page Manufacturing Company. (*See* Taylor, Thomas, assignor.)					
194,365	Page, Moses P., Eureka, Ill. Alloy for plating metallic articles	Aug. 21, 1877	607		12	329
197,885	Page, Preston L., Minneapolis, Minn. Pantograph	Dec. 4, 1877	178	54	12	971
	Page, Thomas N. (*See* Gray, Solomon S., assignor.)					
198,520	Pagin, Joel, Washington Prairie, Iowa. Harvester-rake	Dec. 25, 1877	848		12	1093
	Paige, H. C., *et al.* (*See* Dilg, Henry N., assignor.)					
186,949	Paige, William H., Springfield, Mass. Core for casting car-wheels	Feb. 6, 1877	35	14	11	207
	Paine & Son, C. E. (*See* Smith, Hiram B., assignor.)					
192,626	Paine, Henry M., Newark, N. J. Stencil-pen	July 3, 1877	72	21	12	22
196,379	Paine, Ira A., New York, N. Y. Glass ball for targets	Oct. 23, 1877	733	212	12	689
	Painter, John W., *et al.* (*See* Myers, Teeter H., assignor.)					
192,930	Painter, Washington, Albion, Ill. Stump-plow	July 10, 1877	391	116	12	74
7,620	Painter, William, Baltimore, Md. Counterfeit-coin detecter	Apr. 17, 1877	853	262	11	685
187,411	Same.....Pump-valve	Feb. 13, 1877	489	152	11	280
118,146	Same.....Forming joints in gas and water mains	Dec. 11, 1877	441	138	12	1019
193,029	Painter, William, assignor of one-half interest to L. R. Keizer, Baltimore, Md. Plaiting-machine	July 10, 1877	484	146	12	86
192,276	Paisley, John W., Randolph, N. Y. Fence	June 19, 1877	789	240	11	1097
191,998	Palatini, Constantino, New York, N. Y. Spring-gun	June 12, 1877	478	147	11	1044
193,176	Same.....Fire-escape	July 17, 1877	636	193	12	115
192,595	Palen, Matthew, and D. Sexton, San Bernardino, Cal. Aquarium	July 3, 1877	39	12	12	18
195,302	Palen, Willis, Paterson, N. J. Scroll-sawing machine	Sept. 18, 1877	576	167	12	497
	Pallas, Leopold. (*See* Labarthe, Guillemar & Pallas					
190,613	Pallatini, Constantino, New York, N. Y. Cigarette-machine	May 8, 1877	512	152, 153	11	821
196,695	Palliser, William, London, England. Compound ordnance	Oct. 30, 1877	1060	308	12	745
197,168	Same.....Breech-loading ordnance	Nov. 13, 1877	457	134, 135	12	884
189,381	Palm, Charles, and J. Fitzgerald, Corro Gordo, Ill. Railway-joint	Apr. 10, 1877	373	120	11	616
197,794	Palm, Gardner C., Andersonburg, Pa. Air-feeder for stoves, &c	Dec. 4, 1877	90	27	12	958
194,366	Palm, James H., Lexington, Ohio. Riding-cultivator	Aug. 21, 1877	607	182	12	329
188,402	Palm, Jeremiah, Sandwich, Ill. Spring-hinge	Mar. 13, 1877	448	139	11	447
187,479	Palmateer, William A., assignor to self and J. S. Hosmer, Johnstown, N. Y. Overstitch sewing-machine	Feb. 20, 1877	575	178	11	298, 299
192,184	Palmenberg, Joseph R., New York, N. Y. Show-stand	June 19, 1877	689	211	11	1084
	Palmer & Co., S. W. (*See* Palmer, Josiah F., assignor.)					
197,740	Palmer, Aaron, Rochester, N. Y., assignor of two-thirds interest to J. A. Holmes, Arlington Heights, Ill., and W. N. Oothout, Rochester, N. Y. Malt and grain drier	Dec. 4, 1877	33	11	12	951
	Palmer, Amos B. (*See* Jillson & Palmer.)	(Reissue.)				
197,409	Palmer, Augustus C. and A. H., Utica, N. Y. Fire-alarm-telegraph signal-box	Nov. 20, 1877	703	211	12	879
	Palmer, Augustus H. (*See* Palmer, Augustus C. and A. H.)					
191,462	Palmer, Augustus H., assignor of one-half interest to A. D. Barber, jr., Utica, N. Y. Lock and key	May 29, 1877	1378	416	11	969
197,399	Palmer, Augustus H., and A. D. Barber, jr., Utica, N. Y. Hasp-lock for car-doors	Nov. 20, 1877	702	210	12	879

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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194,718	Palmer, Catharine L., Chicago, Ill. Folding and adjustable scaffold for windows	Aug. 28, 1877	951	282	12	385
186,609	Palmer, Charles P., West Concord, Vt. Lamp-chimney cleaner	Jan. 23, 1877	809	250	11	142
188,069	Same.....same	Mar. 6, 1877	108	33	11	395
	Palmer, Corydon B. (*See* Mantell, James, assignor.)					
	Same.....(*See* Wilder, Aretus A., assignor.)					
185,954	Palmer, Frank L., Montville, Conn. Sewing-machine for quilting	Jan. 2, 1877	143	44	11	27
	Palmer, Franklin G. (*See* Palmer, Jason J. and F. G.)					
	Palmer, Frederic A. (*See* Keyser, John H., assignor.)					
194,308	Palmer, George, Littlestown, Pa. Thief-detecter for money-drawers, &c	Aug. 21, 1877	551	166	12	322
7,517	Palmer, Henry L., Brooklyn, N. Y., assignor, by mesne assignments, to B. C. Faurot, trustee. Apparatus for lining paper boards.....(Reissue)	Feb. 20, 1877	778	242	11	325
197,490	Palmer, Henry L., Brooklyn, N. Y. Stove-board platform, &c	Nov. 27, 1877	810	242	12	903
198,412	Same.....Non-conducting platform or mat	Dec. 18, 1877	729	221	12	1067
195,041	Palmer, Henry U., Brooklyn, N. Y. Barrel-trussing machine	Sept. 11, 1877	299	90, 91	12	443
	Palmer, Herbert F. (*See* Nolan, Patrick W., assignor.)					
190,357	Palmer, Horace A., Rochester, N. Y. Sewer-trap	May 1, 1877	238	71	11	777
192,951	Palmer, Isaac H., Lodi, Wis. Windmill	July 10, 1877	392	117	12	74
194,839	Same.....same	Sept. 4, 1877	82	27	12	412
195,157	Same.....Device for oiling windmills	Sept. 11, 1877	417	124	12	466
189,645	Palmer, James M., Boston, Mass., assignor of one-half interest to G. G. Shaw, Biddeford, Me. Carbureter	Apr. 17, 1877	644	201	11	659
197,944	Palmer, Jason J. and F. G., Philadelphia, Pa. Carbureting-lamp	Dec. 11, 1877	243	75	12	989
189,382	Palmer, John H., Warren, Pa. Spring bed-bottom	Apr. 10, 1877	373	121	11	616
196,037	Palmer, John S., Mystic Bridge, Conn. Device for exhibiting shoes	Oct. 9, 1877	360	103	12	620
	Palmer, Joseph B., *et al.* (*See* Graham, Edmund H., assignor.)					
195,158	Palmer, Josiah F., Auburn, N. Y., assignor to S. W. Palmer & Co. Snow-shovel	Sept. 11, 1877	418	124	12	466
188,257	Palmer, Lemuel R., Belfast, Me. Machine for jointing staves	Mar. 13, 1877	299	94	11	426
189,777	Palmer, Lewis A., assignor of one-half interest to C. A. House, Boston, Mass. Corset	Apr. 17, 1877	784	241	11	676
190,156	Palmer, Martin L., Trivoli, Ill. Feather-renovating machine	May 1, 1877	45	13	11	752
188,938	Palmer, Matthew H., Mantorville, Minn. Middlings-separator	Mar. 27, 1877	992	301	11	539
193,129	Palmer, Norman A., Wagram, Ohio. Hand corn-planter	July 17, 1877	598	181	12	109
195,840	Palmer, Samuel M., assignor to W. McDonald, Glens Falls, N. Y. Ring and pulley for neck-yokes	Oct. 2, 1877	145	41	12	582
195,841	Palmer, Solomon, Sipes' Mill, Pa. Stone-drilling machine	Oct. 2, 1877	146	42	12	582
	Palmer, Wilford L. (*See* Bliss & Badger, assignors.)					
	Same.....(*See* Bliss, Jonathan, assignor.)					
187,553	Palmer, William, New York, N. Y. Car-axle lubricater	Feb. 20, 1877	641	199	11	307
187,554	Same.....Car-coupling	Feb. 20, 1877	642	200	11	307
189,133	Same.....Car-axle lubricator	Apr. 3, 1877	104	38	11	573
	Palmer, William H. (*See* de Beaumont, Alexandre, assignor.)					
193,829	Palmer, William W., Jersey City, N. J. Center-board for vessels	Aug. 7, 1877	32	10	12	238
196,823	Palmero, Joseph R., Gonzales, Tex. Cotton-seed and corn planter	Nov. 6, 1877	84	26	12	773
	Pancoast & Maule. (*See* Thornton, William E., assignor.)					
193,776	Pancost, John J., Saybrook, Ohio. Whiffletree attachments	July 31, 1877	1276	383	12	220
193,890	Panknin, Charles F., Charleston, S. C. Fertilizer	Aug. 7, 1877	90		12	247
193,615	Panton, William, Quincy, Mass. Machinery for scouring and dressing leather	July 31, 1877	1115	335	12	198
188,479	Papin, Peter M., Saint Louis, Mo. Lubricating compound	Mar. 20, 1877	534		11	467
187,301	Paquelin, Claude A., Paris, France. Cauterizing apparatus	Feb. 13, 1877	384	122	11	266
187,667	Paquette, John J., New Orleans, La. Carbureter	Feb. 20, 1877	750	232	11	321
189,490	Same.....same	Apr. 10, 1877	478	151	11	629
189,778	Same.....Gage-glass	Apr. 17, 1877	784	241	11	676
196,165	Pardessus, Semon J., New York, N. Y. Ventilating glass-shade and cover for plants	Oct. 16, 1877	504	147	12	648
	Pardun, Vincen. (*See* Bestor, Francis L., assignor.)					
196,593	Parent, Caleb, Hamilton, Ohio. Lathe for turning paper-mill rolls	Oct. 30, 1877	963	279	12	732
	Paret, John. (*See* Silva, Albert P., assignor).....(Reissue.)					
188,664	Parham, Charles, Philadelphia, Pa. Lock and chain fastening combined	Mar. 20, 1877	708	217	11	491
191,706	Paris, Daniel E., West Troy, N. Y. Cooking-stove	June 5, 1877	183	57, 58	11	1001
194,107	Paris, Daniel E., Omaha, Nebr. Parlor-stove	Aug. 14, 1877	341	102	12	286
186,268	Parise, Achille, Naples, Italy. Combination-lock	Jan. 16, 1877	452	138	11	84
195,945	Park, Francis, Deerfield, Mass. Carriage-lantern	Oct. 9, 1877	268	76	12	606
193,545	Park, George H., assignor of one-half interest to A. and G. J. Leach, Rome, N. Y. Pencil-sharpener	July 24, 1877	1029	309	12	175
198,672	Park, Hardy B., Dallas, Tex. Air-pressure fluid-vent	Dec. 25, 1877	994	302	12	1114
192,345	Park, James, jr., Pittsburg, and G. Hay, Allegheny, Pa. Manufacture of crucibles	June 26, 1877	886		11	1121
192,346	Park, James, jr., Pittsburg, Pa. Soft-center ingot or slab	June 26, 1877	887		11	1121
185,956	Park, Levi, assignor of one-half interest to A. V. Gerber, Rome City, Ind. Scaffold	Jan. 2, 1877	145	44	11	27
189,780	Park, Robert W., Philadelphia, Pa. Hydrocarbon gas lamp	Apr. 17, 1877	786	242	11	677
191,170	Same.....Hydrocarbon-vapor burner	May 22, 1877	1089	326	11	913
191,252	Same.....Vapor-burner	May 29, 1877	1186	356	11	935
182,901	Park, Theron, assignor of one-half interest to W. C. Beone, Brooklyn, N. Y. Fire-kindler	Apr. 24, 1877	930	283	11	794
187,233	Park, Webster, Norwich, Conn. Water-meter	Feb. 13, 1877	316	102	11	257
195,736	Same.....Lock for desks, &c	Oct. 2, 1877	36	11	12	566
	Parker & Stone Reaper Company. (*See* Kettlewell, George, assignor.)					
187,169	Parker, Abijah S., assignor of one-half interest to T. R. Morgan, Binghamton, N. Y. Hydrant-valve	Feb. 6, 1877	236	77	11	235
	Parker, Bowdoin S., administrator. (*See* Rose, Clemens B.)					
	Parker, Carson, *et al.* (*See* Vanwormer, William H., assignor.)					
	Parker, Charles. (*See* Parker, Dexter W., assignor.)					
196,380	Parker, Charles A., Worcester, Mass. Combined anvil and vise	Oct. 23, 1877	739	212	12	659
191,260	Parker, Charles P., Joliet, Ill. Barbed-fence	Aug. 14, 1877	488	147	12	306
187,897	Parker, Daniel W., Cambridge, Mass. Stove-polish	Feb. 27, 1877	997		11	363
187,898	Parker, Dexter W., assignor to C. Parker, Meriden, Conn. Coffee-mill	Feb. 27, 1877	998	308	11	363
190,895	Parker, Edmund A., assignor of one-half interest to J. E. Parker, Meriden, Conn. Water-urn	May 15, 1877	804	238	11	867
193,277	Parker, Edmund A., assignor of one-half interest to J. E. Parker, West Meriden, Conn. Pitcher	July 17, 1877	748	229	12	129
188,403	Parker, Eliphalet H., Bucksport, Me. Mail-bag	Mar. 13, 1877	449	139	11	447
188,258	Parker, Emery, assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Knob-latch	Mar. 13, 1877	360	94	11	427
192,656	Parker, Emery, New Britain, Conn. Safety-gearing	July 3, 1877	107	30	12	27

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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196,696	Parker, Emery, assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Shutter-fastening	Oct. 30, 1877	1062	308	12	745
196,697	Same.....Sash lift and lock	Oct. 30, 1877	1063	309	12	745
192,080	Parker, Ephraim, Boston, Mass. Sash-fastener	June 19, 1877	586	178	11	1071
	Parker, George D. (*See* Bliven & Parker.)					
190,073	Parker, George E., Newark, N. J. Pocket-lantern	Apr. 24, 1877	1113	338	11	727
192,385	Parker George W., Gardner, Mass. Machine for making pail-bottoms and barrel-heads	June 26, 1877	926	278	11	1127
186,156	Parker, Henry, assignor to self, A. A. Brown, and F. A. Lanter, Osawatomie, Kans. Easy chair	Jan. 9, 1877	336	103	11	62
193,420	Parker, Lomer N., Perkinsville, Vt., assignor to E. E. Mack, Albany, N. Y. Combined collar-box and toy bank	July 24, 1877	906	276	12	159
190,358	Parker, James H., Newark, N. J. Bottle-stopper	May 1, 1877	239	71	11	777
	Parker, John E. (*See* Parker, Edmund A., assignor.)					
192,277	Parker, Joseph, and J. H. Greenleaf, New Haven, Conn.; said Greenleaf assignor to said Parker. Process and apparatus for manufacturing paper, lint, or felt	June 19, 1877	789	240	11	1097
196,164	Parker, Joseph N., Augusta, Me. Knife and butter extractor	Oct. 16, 1877	503	147	12	648
187,668	Parker, Lewis C., Robinson, Kans. Tobacco-safe	Feb. 20, 1877	751	233	11	322
192,712	Same.....same	July 3, 1877	159	45	12	34
	Parker, Moses C., *et al.* (*See* Guzeman, William A., assignor.)					
186,365	Parker, Stillman, assignor to self, J. and J. C. Dysart, and G. L. Myers, Altoona, Pa. Machine for racking hoofs	Jan. 16, 1877	560	170	11	97
196,308	Parker, Thomas E., Lynn, Mass. Embroidery-pattern card	Oct. 23, 1877	667	193	12	679
	Parker, Willard. (*See* Johnson, Moses C., assignor.)					
186,610	Parker, William D., assignor of one-half interest to A. C. Emmons, Worcester, Mass. Reed-organ stop-action	Jan. 23, 1877	810	250	11	142
188,175	Parker, William D., Worcester, Mass. Octave and manual coupler for organs	Mar. 6, 1877	207	64	11	408
187,168	Parker, William H., Bedford, Iowa. Revolving clothes-rack	Feb. 6, 1877	235	77	11	234 235
	Parker, Zera C. (*See* Ladd & Parker.)					
	Parkhill, A. M. (*See* Smoot, Thomas E., assignor.)					
	Parkhurst, Andrew J. (*See* Baldwin & Parkhurst.)					
	Parkhurst, Benjamin E. (*See* Thompson & Parkhurst.)					
191,251	Parkhurst, James H., assignor of one-half interest to G. C. Hutchinson, Chicago, Ill. Bottle-stopper fastener	May 29, 1877	1186	356	11	935
192,596	Parkhurst Joseph P., Conklingville, N. Y. Spoke-socket	July 3, 1877	40	12	12	18
185,834	Parkhurst, William B., assignor to G. L. Davis, J. A. Wiley, J. M. Stone, G. G. Davis, J. H. Stone, and J. H. Davis, North Andover, Mass. Cop-builder	Jan. 2, 1877	20	7	11	11
	Parkinson, Emi, *et al.* (*See* Devoe, Benjamin G., assignor.)					
	Parkison, James A., *et al.* (*See* Long, William F., assignor.)					
	Parkison, Long & McKinney. (*See* Dixon, William M., assignor.)					
	Parkison, Manuel, *et al.* (*See* Long, William F., assignor.)					
187,480	Parks, Austin S., and L. E. Bathrick, Winchendon, Mass. Burner for lanterns	Feb 20, 1877	578	179	11	299
190,157	Parks, Charles E., Somerville, Mass. Ticket-punch	May 1, 1877	47	13	11	752
197,856	Parks, Dana, Boston, Mass. Self-leveling berth for vessels	Dec. 4, 1877	178	54	12	971
195,529	Parks, Thomas H. B., Arkadelphia, Ark. Removable top for show-cases	Sept. 25, 1877	803	238	12	538
	Parks, Warren L. (*See* Davis, William S., assignor.)					
	Parmin, William D. ((*See* Knowlton, George A., assignor.)					
187,302	Parmelee, Dubois D., New York, assignor to A. W. Billings, Brooklyn, N. Y. Machine for triturating and polishing metallic powders	Feb. 13, 1877	385	122	11	267
187,303	Same.....Manufacture of metallic paints and powders	Feb. 13, 1877	386	122 123	11	267
188,535	Parmenter, Isaac W., New York, N. Y. Evaporator for hot-air registers	Mar. 20, 1877	583	180	11	474
185,955	Parmer, Devore, assignor to H. McJonn, Fort Madison, Iowa. Tallow-cup	Jan. 2, 1877	145	44	11	27
193,276	Parnall, John, Bristol, England. Platform-scales	July 17, 1877	747	228 229	12	129
194,719	Parrish, Joseph V., Union Valley, Mo. Horse hay-rake	Aug. 28, 1877	952	282	12	386
	Parrish, Myron W. (*See* Abbott & Parrish.)					
189,779	Parrish, Myron W., Jackson, Mich. Galvanic battery	Apr. 17, 1877	785	241	11	676
191,702	Parrish, Thomas J., Benton, Mo. Churn	June 5, 1877	185	58	11	1002
197,401	Parrott, Henry R., Dayton, Ohio. Sash-fastener	Nov. 20, 1877	705	211	12	879
	Parrott, Robert P. (*See* Lawson, Peter B., assignor.)					
	Same.....(*See* Tuttle, Colvin, assignor.)					
	Parry, Charles T., *et al.* (*See* Longstreth, Edward, assignor.)					
191,545	Parry, Charles T., assignor to Burnham, Parry, Williams & Co., Philadelphia, Pa. Exhaust apparatus for street engines	June 5, 1877	37	11	11	981
194,309	Parry, Morgan L., Galveston, Tex. Pile for bulkheads and other structures	Aug. 21, 1877	552	166	12	322
191,707	Parshall, Charles H., Detroit, Mich. Lubricator	June 5, 1877	184	53	11	1001
191,171	Same.....same	May 22, 1877	1090	326	11	913
187,170	Parson, Henry E., Watertown, N. Y. Furnace for steam-boilers	Feb. 6, 1877	236	77	11	235
191,546	Same.....Hydro-carbon-injector	June 5, 1877	37	11	11	981
	Parsons, George. (*See* Backes, Michael, assignor.)					
193,457	Parsons, Henry F., Los Angeles, Cal., assignor to D. R. Morse, New York, N. Y. Stage-scenery and operating mechanism	July 24, 1877	940	285 286	12	164
186,435	Parsons, John F., New York, N. Y. Joining pipes	Jan. 23, 1877	647	198	11	120
191,775	Parsons, John S., assignor of one-half interest to J. H. Yundt, Indianapolis, Ind. Syringe	June 12, 1877	256	81	11	1016
193,891	Parsons, Joseph A., Cleveland, Ohio. Rotary pump	Aug. 7, 1877	90	29	12	247
	Parsons, Samuel J. (*See* Poole, John T., assignor.)					
	Parsons, Samuel V. (*See* Cornell, George E., assignor.)					
195,228	Partridge, Andrew, assignor to self and T. A. Curtis, Springfield, Mass. Spooling-guide	Sept. 18, 1877	502	148	12	486
	Partridge, George W. D. (*See* Bryant & Partridge.)					
	Partridge, John S., *et al.* (*See* Wilcox, Edward M., assignor.)					
198,040	Parvin, Thomas H., Chicago, Ill. Lever take-up for grain-binders	Dec. 11, 1877	336	104	12	1004
188,752	Pasquale, Francisco, Stella and P. G. B. Zanini, Diano-Marina, Italy. Rotary engine	Mar. 27, 1877	802	245	11	513
198,763	Passmore, Levis, Bridgewater, Va. Sad-iron	Nov. 6, 1877	26	8	12	764
185,870	Patch, Frank L., Florence, Mass. Chair	Jan. 30, 1877	1076	332	11	185
196,594	Patch, John W., Boston, Mass. Nursing-shield	Oct. 30, 1877	964	260	12	782
195,639	Paton, William H., assignor to A. L. Wood, New York, N. Y. Broom	Sept. 25, 1877	906	270	12	552
7,875	Patric, Charles E., Springfield, Ohio. Seeding-machine (Reissue)	Sept. 4, 1877	204	63	12	428
188,404	Same.....Distributer for grain-drills	Mar. 13, 1877	449	139	11	417
189,383	Same.....Grain-drill	Apr. 10, 1877	374	121	11	616

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Drg.	Vol.	Page.
195,530	Pattburg, Lewis, Jersey City, N. J. Picture-frame	Sept. 25, 1877	804	238	12	538
	Pattee, Henry H., *et al.* (*See* Eichholtz, Mathias, assignor) (Reissue.)					
	Same (*See* Pattee, James H., assignor.)					
	Pattee, Henry H. (*See* Schroder, John, assignor) (Reissue.)					
187,899	Pattee, Henry H., assignor of two-thirds interest to J. H. Pattee and I. P. Pillsbury, Monmouth, Ill. Cultivator	Feb. 27, 1877	998	309	11	363
	Pattee, James H., *et al.* (*See* Eichholtz, Mathias, assignor) (Reissue.)					
	Same (*See* Pattee, Henry H., assignor.)					
195,042	Pattee, James H., assignor of two-thirds interest to H. H. Pattee and I. P. Pillsbury, Monmouth, Ill. Cultivator	Sept. 11, 1877	300	91	12	449
	Patteo, James M. (*See* Ca valho, Solomon N., assignor.)					
187,304	Patten, Charles W., Salisbury, Mass. Turn-over carriage-seat	Feb. 13, 1877	389	123	11	267
193,458	Patten, George M., assignor to T. N. Hyde, Bath, Me. Ship's windlass	July 24, 1877	942	286	12	164
192,081	Patten, William H., Clockville, N. Y. Horse hay-rake	June 19, 1877	587	178 179	11	1071
	Patterson & Bishop. (*See* Shook, Levi, assignor.)					
7,545	Patterson, Chester R., Pittston, Pa. Planing-machine (Reissue)	Mar. 6, 1877	261	81	11	414
188,259	Same Pressure device for planing and molding machines	Mar. 13, 1877	301	95	11	427
191,878	Same Cutter-head	June 12, 1877	359	111	11	1029
	Patterson, Henry W., *et al.* (*See* Hainsworth, William, assignor.)					
186,752	Patterson, James M., Euchee, Tenn. Marking-brush	Jan. 30, 1877	946	294	11	171
	Patterson, Lemuel. (*See* Widger & Patterson.)					
193,278	Patterson, Lemuel, assignor of one-half interest to W. A. Myers, Parker City, Pa. Device for preventing oil-well tubing from falling	July 17, 1877	749	239	12	129
193,992	Patterson, Lemuel, assignor of one-half interest to J. K. Hunter, Parker City, Pa. Window-sash fastener	Aug. 7, 1877	192	58	12	260
198,310	Patterson, Robert N., Bryan, Ohio. Compositor's stand	Dec. 18, 1877	630	191	12	1053
	Patterson, Thomas L. (*See* Walker & Patterson.)					
195,946	Patterson, William N., Frankfort, Ky., assignor of one-half interest to G. W. Miller. Burglar-alarm	Oct. 9, 1877	269	76	12	606
193,991	Patterson, William W., Corning, Iowa. Lightning-rod	Aug. 7, 1877	192	58	12	260
189,646	Pattillo, Samuel V., assignor to self and F. J. Kohn, Greenville, Ala. Saw-filing machine	Apr. 17, 1877	646	201	11	659
	Patton, William J. (*See* Duke, Jesse R., assignor.)					
195,388	Patton, William J., Little Rock, Ark. Insulated bath-tub	Sept. 18, 1877	654	194	12	508
187,305	Pattus, Ami L. J., Saint Croix, Switzerland. Repeating-watch	Feb. 13, 1877	389	124	11	267
196,038	Pa tz, August F. W., Philadelphia, Pa. Rotary e gine	Oct. 9, 1877	361	103	12	620
7,794	Paul, Almarin B., San Francisco, Cal. Self-discharging pulverizing-barrel for ores. (Reissue)	July 17, 1877	787	242	12	135
193,030	Same Pan-amalgamator	July 10, 1877	485	146	12	87
197,169	Paul, George D., assignor of one-half interest to P. P. Paul, Jersey City, N. J. Shoe-fastener	Nov. 13, 1877	458	135	12	834
	Paul, Parker P. (*See* Paul, George D., assignor.)					
190,512	Paulding, William H., New York, N. Y. Portable pump	May 8, 1877	417	121	11	809
197,887	Pauly, Peter J., Saint Louis, Mo. Jail-cell	Dec. 4, 1877	179	54	12	971
	Pawling, Henry H. (*See* Jones, W. Davidson, assignor.)					
	Paxton, Thomas B. (*See* Nicholas, Samuel C., assignor.)					
189,571	Pay, Stephen R., Peoria, Ill. Folding flower-stand	Apr. 17, 1877	578	179	11	650
	Payne & Son, B. W. (*See* Taber, Harris, assignor.)					
193,031	Payne, Addis E., and J. S. George, Bridgeport, Conn. Machine for polishing the eyes of needles	July 10, 1877	486	147	12	87
	Payne, Cornelius B. (*See* Ramsdell, Daniel P., assignor.)					
194,840	Payne, Charles I., assignor to self and J. W. Burnett, Binghamton, N. Y. Heating attachment for lamps	Sept. 4, 1877	83	27	12	412
197,493	Payne, Edward, Chicago, Ill. Rail-joint	Nov. 27, 1877	814	243	12	904
193,459	Payne, Jacob R., Concord, Tenn. School-desk and settee	July 24, 1877	942	286	12	164
	Payne, Joseph D., *et al.* (*See* Petrie, Walter R., assignor.)					
195,389	Payne, Joseph M., Dallas, Tex. Sulky-plow	Sept. 18, 1877	654	194	12	508
191,776	Payne, William H., Sandwich, Ill. Grain-binder	June 12, 1877	257	81	11	1016
195,727	Peabody, James A., Chelsea, Mass. Hobby-horse	Oct. 2, 1877	37	11	12	506
	Peabody, Seargent. (*See* Selden, Charles, assignor.)					
187,306	Peacock, Elijah P., assignor to Thorn Wire Hedge Company, Chicago, Ill. Machine for twisting barbed wire	Feb. 13, 1877	391	124	11	267
185,957	Peacock, John C., and C. W. Bradley, London, England. Carbureter	Jan. 2, 1877	146	44	11	27
	Peacock, William, *et al.* (*See* Bartlett, Francis C., assignor.)					
186,269	Peak, Ezra, Montana, Kans. Gang-plow	Jan. 16, 1877	453	139	11	84
192,873	Pearce, James W., Cleveland, Ohio. Steam-pump	July 10, 1877	342	101	12	66
7,734	Pearce, Jonathan, Shelbyville, Ky. Seed-sower (Reissue)	June 12, 1877	539	165	11	1052
186,214	Pearce, Jonathan, Shelby County, Ky. Seed-sower	Jan. 16, 1877	405	124	11	78
190,896	Peard, John, Brooklyn, N. Y. School-desk	May 15, 1877	805	238	11	867
186,157	Pearl, Adolph, Brooklyn, N. Y. Cigaret e	Jan. 9, 1877	337	108	11	62
191,253	Pearl, Eugene T., Hartford, Conn. Pantograph	May 29, 1877	1187	357	11	935
	Pears, Harry P. (*See* B rr, William H., assignor.)					
	Pearson, Edward. (*See* Hallas, Flower & Pearson.)					
	Pease, Allen L., *et al.* (*See* Harden, Harvey D., assignor.)					
195,390	Pease, Charles G., Boston, Mass. Convertible-chair	Sept. 18, 1877	655	194	12	509
186,871	Pease, Edwin O., assignor of one-half interest to G. H. Eastman, Minneapolis, Minn. Treating bran	Jan. 30, 1877	1077	333	11	187
192,837	Pease, John F., Syracuse, N. Y. Hot-air furnace	July 10, 1877	310	90	12	62
191,709	Peberdy, Samuel, Philadelphia, Pa. Needle for knitting or sewing	June 5, 1877	186	58	11	1002
198,673	Peck, Charles F., Georgetown, D. C. Brick-kiln	Dec. 25, 1877	995	303	12	1114
187,307	Peck, Charles O., Pittsfield, Mass. Flour and meal sifter	Feb. 13, 1877	393	124	11	267
192,126	Peck, Deon E., Burlington, and D. C. Peck, Winsted, Conn. Door-check	June 19, 1877	631	192	11	1076
189,491	Peck, George N., Brooklyn, N. Y. Packing-case for demijohns, &c	Apr. 10, 1877	483	152	11	629
	Peck, Henry F. (*See* Stearns & Ogden, assignors.)					
196,693	Peck, Isaac D., assignor of one-half interest to E. Houck, Bedford, Iowa. Sectional chimney	Oct. 30, 1877	1063	309	12	736
	Peck, Joel W. S., *et al.* (*See* Bliss, Francis D., assignor.)					
186,753	Peck, Kortum K., Faribault, Minn. Cover for spring bed-bottoms	Jan. 30, 1877	946	294	11	171
	Peck, Orlin A. (*See* Braymer, Frederick A., assignor.)					
	Peck, Richard. (*See* Baltzley, Henry H., assignor.)					
194,310	Pec k, Sanford, Waldron, Ill. Safety clamp and hook for cultivators	Aug. 21, 1877	553	166	12	322
	Peck, Stow & Wilcox Company. (*See* Hammond, William E., assignor.)					
	Same (*See* Stow, Enos E., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
192,787	Peck, Walter, Rockford, Ill. Windmill	July 3, 1877	228	66	12	43
	Peckham, Elijah J. (*See* McIntyre, Anson L., assignor.)					
	Peckham, Henry F. (*See* Fahnestock & Peckham.)					
195,852	Peckham, Isaac B., Bangor, Me. Head-rest	Oct. 2, 1877	146	42	12	582
192,155	Peckham, William H., Jersey City, N. J. Spectacle-frame	June 19, 1877	630	192	11	1076
195,531	Peden, Mary C., Caverna, Ky. Medicinal compound	Sept. 25, 1877	805		12	538
187,726	Peden, Samuel A., Johnstown, Pa. Picture-exhibitor	Feb. 27, 1877	827	258	11	341
191,611	Peel, John R., London, Canada. Drawing-instrument	June 5, 1877	93	28, 29	11	989
194,750	Peel, Lawson G., Hazelhurst, Miss. Adjusting device for grinding-mills	Aug. 28, 1877	953	283	12	386
	Peerless Brick Company. (*See* Adams, Thomas F., assignor.)					
190,359	Peet, Charles M., assignor of one-half interest to Wells & Riggin, Waverly, Ill. Gutter-hanger	May 1, 1877	240	71	11	778
189,647	Peet, Wilbur R., Viola, Iowa. Ditcher	Apr. 17, 1877	646	201	11	659
189,256	Peffley, John R., Ladoga, Ind. Fence-post	Apr. 3, 1877	224	75	11	588
194,459	Pefley, Samuel J., Ladog, Ind. Land-marker for planting corn	Aug. 21, 1877	704	210	12	342
	Pegram, William D. (*See* Hotchkiss & Pegram.)					
190,780	Pegram, William D., and W. H. Hotchkiss, Moberly, Mo. Railway-car stove and fire-extinguisher	May 15, 1877	701	207	11	853
191,999	Peirce, Cyrus E., McPherson, Kans. Compound for artificial stone	June 12, 1877	479		11	1044
185,835	Peirce, Eben, and S. Eggers, New Bedford, Mass. Cartridge	Jan. 2, 1877	21	17	11	11
197,170	Peirce, Lewis, Salem, assignor of four-tenths interest to G. T. Sheldon, Chelmsford, Mass. Roofing	Nov. 13, 1877	459	135	12	834
195,640	Peirce, Robert O., Portland, Me. Hoisting apparatus	Sept. 25, 1877	907	270	12	553
	Peirce, Vernon R. (*See* Bradford & Peirce.)					
188,941	Peltier, Alphonse, and M. Hoerning, Williamsburg, N. Y. Combined aquarium, fountain, and flower-stand	Mar. 27, 1877	995	305	11	539
195,043	Peltier, James W., and T. D. Brown, Knoxville, Tenn. Copy-holder	Sept. 11, 1877	301	91	12	449
193,546	Peltz, Emil, Astoria, N. Y. Scarf	July 24, 1877	1030	309	12	175
	Pemberton, Cyrus L., *et al.* (*See* Brumley, Samuel, assignor.)					
	Pemberton, Elisha W., *et al.* (*See* Brumley, Samuel, assignor.)					
	Pendergraft, Wilson A. (*See* Poole & Pendergraft.)					
	Pendleton, Frank C. (*See* Knowles, Proctor & Pendleton.)					
192,838	Pendleton, Harford E., assignor to self and D. A. Cotter, Russell, Iowa. Churn	July 10, 1877	310	91	12	62
190,614	Pendleton, John H., Brooklyn, assignor to self and A. H. Tiers, New York, N. Y. Coffee-huller	May 8, 1877	514	153	11	822
197,889	Pendleton, John H., Brooklyn, assignor to self, A. H. and C. Tiers, New York, N. Y. Mill for grinding tortilla, &c	Dec. 4, 1877	181	55	12	972
197,888	Pénc, Jean A., Paris, France. Instrument for binding grain	Dec. 4, 1877	180	55	12	971
190,074	Penfield, Charles W., New Britain, Conn. Sash-fastener	Apr. 24, 1877	1114	338	11	727
	Penketh, James. (*See* Tilton, George W., assignor) (Reissue.)					
187,900	Penn, George W., Onawa, and W. S. Sharpneck, assignors to P. D. Mickel, Missouri Valley, Iowa. Wind-wheel	Feb. 27, 1877	999	309	11	263
197,051	Penn, Martin A., Washington, D. C. Cigar-box	Nov. 13, 1877	334	99	12	816
187,412	Pennal, William H., Bold Branch, S. C. Seed-dropper	Feb. 13, 1877	491	153	11	250
192,597	Penney, John W., Mechanics Falls, Me. Scroll sawing machine	July 3, 1877	40	12	12	18
193,993	Pennie, Henry, Brooklyn, assignor to self and J. L. Sharp, New York, N. Y. Pipe-coupling	Aug. 7, 1877	193	58	12	260
194,841	Pennington, James J., Henryville, Tenn. Flying-machine	Sept. 5, 1877	83	27	12	412
	Pennington, John. (*See* Mosher & Pennington.)					
194,167	Pennock, Samuel, Ithaca, N. Y. Plow-sulky	Aug. 14, 1877	404	120	12	294
194,367	Same. Road-scraper	Aug. 21, 1877	608	182	12	329
	Pennsylvania Steel Company. (*See* Richardson, John T., assignor.)					
189,492	Pennycook, John, Chicago, Ill. Collapsible core for casting metal pipes	Apr. 10, 1877	480	152	11	629
	Pennypacker, Matthias. (*See* Pyott, Louis T., assignor) (Reissue.)					
189,648	Pennypacker, Matthias, Philadelphia, Pa. Hoisting apparatus	Apr. 17, 1877	647	201, 202	11	659
189,649	Same. same	Apr. 17, 1877	648	202	11	659
192,788	Penrice, Herbert N., Hatfield, England. Rock-boring and tunneling machine	July 3, 1877	230	66, 67	12	43
192,326	Pentlarge, Fredrick, and P. Hirsch, assignors to said Pentlarge, Brooklyn, N. Y. Vent-bung	June 26, 1877	929	278	11	1127
193,674	Pentz, Levi, assignor of one-half interest to S. R. Taylor, Canton, Ohio. Rein-holder	Dec. 25, 1877	997	303	12	1114
188,939	Peoples, James A., Chicago, Ill., assignor to R. Hart, Rochester, N. Y. Machine for splitting hoop-poles	Mar. 27, 1877	993	305	11	539
192,871	Same. same	July 10, 1877	343	101	12	66
194,842	Same. Hoop-machine	Sept. 4, 1877	84	28	12	412
197,052	Same. Machine for splitting hoop-poles	Nov. 13, 1877	335	99	12	816
193,032	Peoples, John D., Venice P. O., Pa. Hinge for piano-lids	July 10, 1877	487	147	12	87
195,159	Same. Portable hat and clothes hook	Sept. 11, 1877	419	124	12	467
189,572	Peper, Christian, Saint Louis, Mo. Marking plug-tobacco	Apr. 17, 1877	579	179	11	650
	Pepin, François M., *et al.* (*See* Etienne, Salmon, assignor.)					
194,460	Pepper, Leander C., and B. Gephart, assignors of one-half interest to J. T. Drummond and W. L. Albert, Mount Pleasant, Iowa. Harness-saddle	Aug. 21, 1877	704	210	12	342
188,304	Pepple, Edmund, assignor of part interest to G. Harley, T. H. Smythe, Hartford, R. M. and B. F. Buck, Hamilton, Mich. Motor	Mar. 13, 1877	345	108, 109	11	432
191,777	Peppler, John C., Columbus, Ohio. Fire-escape	June 12, 1877	259	82	11	1017
	Percy, Romulus J. (*See* Wilcox, Percy & Daggett.)					
	Perdue, Frank, *et al.* (*See* McBride, Gideon, assignor.)					
	Perdue, Jeremiah M., *et al.* (*See* Stewart, Samuel M., assignor.)					
187,727	Perkins, Charles H., Providence, R. I. Manufacture of horseshoes	Feb. 27, 1877	828	258	11	341
192,127	Same. Horseshoe	June 19, 1877	631	192	11	1077
194,783	Same. same	Sept. 4, 1877	31	9	12	404
	Perkins, Charles W. (*See* Ford, Charles T. and S. A., assignors.)					
188,665	Perkins, Charles W., Washington, D. C. Extension-step for cars	Mar. 20, 1877	709	217	11	491
196,474	Perkins, Duane T., Springfield, Mass. Water-gate	Oct. 23, 1877	825	238	12	701
197,975	Perkins, Elihu L., assignor to N. G. Miller, Bridgeport, Conn. Lock for drawers	Dec. 11, 1877	278	85	12	994
186,611	Perkins, Elijah H. and S. D., Visalia, California. Cultivator	Jan. 23, 1877	811	250	11	142, 143
187,902	Perkins, George H. and J. H., Philadelphia, Pa., assignors to J. Le Comte, New York, N. Y., and Le Comte & Perkins Manufacturing Company (limited), Philadelphia, Pa. Metallic can	Feb. 27, 1877	1001	309	11	363
191,172	Perkins, George H., Philadelphia, Pa., assignor to self, J. Le Comte, New York, N. Y., and Atlantic Refining Company, Philadelphia, Pa. Sheet-metal-can machine	May 22, 1877	1092	336	11	913

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page
192,278	Perkins, George H., and J. Bozorth, Philadelphia, Pa. Feeding mechanism for nail-ing-machines	June 19, 1877	791	240	11	1097
194,168	Perkins, George H., assignor to Le Comte & Perkins Manufacturing Company (limited). Philadelphia, Pa. Machine for shearing sheet metal	Aug. 14, 1877	404	121	12	295
	Perkins, James H. (*See* Perkins, George H. and J. H.)					
196,538	Perkins, James P., Burlington, Wis. Butter and lard package	Oct. 30, 1877	911	264	12	724
195,229	Perkins, John B., Davenport, Iowa. Iron fence-post	Sept. 18, 1877	504	148	12	487
	Perkins, John C. (*See* Leonard & Perkins.)					
	Perkins, John S. (*See* Makepeace, Lysander O., assignor) (Reissue.)					
197,288	Perkins, Joseph, San Francisco, Cal. Sign	Nov. 20, 1877	591	175	12	862
	Perkins, Sanford S. (*See* Huntington, Edgar O., assignor.)					
	Perkins, Solomon D. (*See* Perkins, Elijah H. and S. D.)					
191,173	Perkins, William A., Salem, Mass. Machine for whitening and buffing leather	May 22, 1877	1093	327	11	913
7,950	Perkins, William H., Fall River, Mass. Composition for dressing cotton yarns...(Re-issue	Dec. 11, 1877	487		12	1024
195,532	Same Composition for dressing cotton yarns	Sept. 25, 1877	805		12	538
192,600	Perkins, William J., assignor of one-half interest to J. G. Wallace, Cedar Falls, Iowa. Current-wheel	June 12, 1877	479	147	11	1044
195,900	Perkins, Willis J., Grand Rapids, Mich. Shingle-sawing machine	Oct. 9, 1877	218	62	12	600
	Perrigo, Charles, *et al.* (*See* Colby, Ellery E., assignor.)					
193,279	Perrine, H. Lansing, Freehold, N. J. Automatic train-brake	July 17, 1877	750	230	12	129
186,043	Perrott, Francis W., McGranville, N. Y. Corset	Jan. 9, 1877	236	71	11	48
197,660	Perry, Alvy G., Hickory Flat, Miss. Plow	Nov. 27, 1877	984	294	12	928
192,128	Perry, Benjamin P., Richmond, Ind. Tile-machine	June 19, 1877	632	192 / 193	11	1077
196,166	Perry, Bethune, Albion, Cal. Drawing-pen	Oct. 16, 1877	505	147	12	648
191,547	Perry, Edgar H., Exeter, Ill. Fence	June 5, 1877	40	11	11	981
	Perry, Elkanah S. (*See* Dowling & Perry.)					
195,391	Perry, Elton, assignor of one-half interest to F. Sterzing, Austin, Tex. Device for ringing bells	Sept. 18, 1877	657	195	12	509
	Perry, Francis H. (*See* Earle & Perry.)					
197,890	Perry, Frank W., Philadelphia, Pa. Bottle-stopper	Dec. 4, 1877	182	55	12	972
	Perry, Isaac. (*See* Mercier, Edward, assignor.)					
	Perry, James L. (*See* Bridgman & Perry.)					
188,942	Perry, James W., Keytesville, Mo. Self-dropping corn-planter	Mar. 27, 1877	996	305 / 306	11	539
	Perry, John S., trustee and executor. (*See* Williams, Absalom C., assignor.)					
186,950	Perry, Joseph R., Wilkesbarre, Pa. Wooden house	Feb. 6, 1877	36	14	11	207
	Perry, Nathan B., *et al.* (*See* Williams, Absalom C., assignor.)					
	Perry, Oliver. (*See* Stone, Oren, assignor.)					
187,901	Perry, Oliver, assignor of one-half interest to O. Stone, Flint, Mich. Seeder	Feb. 27, 1877	1000	309	11	363
195,160	Perry, Oliver H., Newtown, and E. P. Watson, New York, N. Y. Draw-bridge, lock, and signal	Sept. 11, 1877	420	124	12	467
198,147	Perry, William V., Beaver Dam, Wis. Car-coupling	Dec. 11, 1877	443	138	12	1019
197,891	Perryn, William F., Toledo, Ohio. Machine for making wash-board legs	Dec. 4, 1877	183	55, 56	12	972
190,360	Pesinger, John J., Brooklyn, N. Y. Folding-basket	May 1, 1877	240	71, 72	11	778
186,159	Pessenger, John S., Birmingham, Conn. Machine for setting elliptic springs	Jan. 9, 1877	338	104	11	62
192,789	Peteler, Francis, Minneapolis, Minn. Band for bundles of grain	July 3, 1877	233	68	12	44
193,994	Same.....Hand-binder for harvester	Aug. 7, 1877	194	59	12	260
193,722	Peter, Jordan, Petaluma, and T. C. Walter, San Francisco, Cal. Filter and cooler	July 31, 1877	1222	367	12	212
197,289	Peters, Alvin L., Anoka, Minn., G. M. Peters, Buffalo, N. Y., and O. E. Peters, Lancaster, Ohio. Anti-friction journal-box	Nov. 20, 1877	592	175	12	862
	Peters, Charles, *et al.* (*See* Bock, Augustus F., assignor.)					
198,148	Peters, Franz, assignor to T. A. Kochs, Chicago, Ill. Dentist's chair	Dec. 18, 1877	441	103	12	1019
7,789	Peters, George M., Columbus, Ohio. Adjustable metallic dash for vehicles..(Reissue).	July 10, 1877	528	159	12	92
196,475	Same.....Dash-board for vehicles	Oct. 23, 1877	826	239	12	701
194,461	Peters, George T., Jersey City, N. J. Car-coupling	Aug. 21, 1877	705	210	12	342
	Peters, Gersham M. (*See* Peters, Alvin L., G. M., and O. E.)					
192,083	Peters, Henry O., Hoosick Falls, N. Y. Fire-extinguisher	June 19, 1877	589	179	11	1071
192,082	Peters, James, Chicago, Ill. Corn-husking glove	June 19, 1877	588	179	11	1071
	Peters, Jourgen W. C., *et al.* (*See* Hoffman, Austin D., assignor.)					
195,641	Peters, J. William C., Chicago, Ill. Metallic bedstead	Sept. 25, 1877	908	270	12	553
	Peters, Orrin E. (*See* Peters, Alvin L., G. M., and O. E.)					
187,044	Petersen, Fred., Grand Rapids, Mich. Corn-planter	Feb. 6, 1877	124	41	11	219
	Petersen, Nicolai. (*See* Arnold & Petersen.)					
187,045	Peterson, Swan, Knoxville, Ill. Pump	Feb. 6, 1877	125	41	11	219
186,160	Peterson, Alfred, Lafayette, Ind. Ditching-machine	Jan. 9, 1877	341	104	11	62
186,612	Peterson, Andrew A., assignor of one-half interest to N. J. Nelson, Chicago, Ill. Clothes-drier	Jan. 23, 1877	812	251	11	143
185,958	Peterson, Charles, and A. Dunnebake, Detroit, Mich. Pipe-wrench	Jan. 2, 1877	148	45	11	28
188,495	Same Combined drill, reamer, and tap	Mar. 13, 1877	450	139	11	447
188,176	Peterson, George W., Oxford, Ala. Plow	Mar. 6, 1877	209	65	11	408
187,555	Peterson, John H., assignor of one-half interest to J. R. Tobin, Philadelphia, Pa. Ornamental stair-rod	Feb. 20, 1877	642	200	11	307
198,675	Peterson, John H., assignor to W. S. Irwin, Philadelphia, Pa. Disinfecting apparatus and safety-seat for water-closets	Dec. 25, 1877	998	303	12	1114
	Peterson, Richard. (*See* Stuart, David, assignor.)					
	Peterson, Richard. (*See* Stuart & Bridge, assignors.)					
	Peterson, Wilson, *et al.* (*See* Munson, Albert L., assignor.)					
198,210	Petingalo, Joseph L., New York, N. Y. Tube for holding cosmetics	Dec. 18, 1877	526		12	1037
193,670	Petmecky, Joseph C., Austin, Tex. Breech-loading fire-arm	July 31, 1877	1179	353	12	206
197,892	Same.....same	Dec. 4, 1877	184	56	12	972
189,381	Petri, John, Covington, Ky. Window-sash	Apr. 10, 1877	376	121	11	616
194,927	Petrie, Margaret, assignor of one-half interest to A. E. Newcomb, Vallejo, Cal. Mos-quito-bar	Sept. 4, 1877	171	53	12	423
189,875	Petre, Walter R., assignor to self, J. D. Payne, and L. P. Woodworth, New Haven, Conn Lubricator for steam-engines	Apr. 24, 1877	904	276	11	709
187,171	Petsch, Otto, and H. Schieble, New York, N. Y. Petroleum-stove	Feb. 6, 1877	238	73	11	235
188,406	Pettebone, Lauren W., Niagara Falls, N. Y. Machine for cutting and winding paper.	Mar. 13, 1877	451	140	11	447
196,126	Petterson, Charl E., Providence, R. I. Settee	Oct. 16, 1877	470	137	12	643
193,547	Pettes, Moses M., assignor to self and A. F. Stowe, Worcester, Mass. Pinchers	July 24, 1877	1031	310	12	175
191,169	Pettibone, Hezekiah W., Attica, N. Y. Umbrella-holder	Aug. 14, 1877	406	121	12	295
	Pettingell, George D. (*See* Fesler & Pettingell.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
198,676	Pettit, Thomas J., San Francisco, Cal. Bed-bottom	Dec. 25, 1877	999	303	12	1115
185,959	Petty, Joseph W., New Orleans, La. Bale-tie	Jan. 2, 1877	148	45	11	28
196,699	Same same	Oct. 30, 1877	1064	309	11	746
	Pfaffle, Albert F. (*See* Hall & Pfaffle.)					
191,710	Pfanne, Charles, Washington, D. C. Air-cooling apparatus	June 5, 1877	187	59	11	1092
191,879	Pfarre, Edward, Brooklyn, N. Y. India-rubber surgical tube	June 12, 1877	359	111	11	1029
195,947	Same Hypodermic-syringe bo tle	Oct. 9, 1877	270	76	12	607
190,615	Pfantz, Daniel M., assignor of one-half interest to L. Sternberger, Philadelphia, Pa. Window-jack	May 8, 1877	515	153	11	822
192,001	Pfeffer, Philipp, New York, assignor to G. W. Read, Brooklyn, N. Y. Wood-drying apparatus	June 12, 1877	481	148	11	1044
191,174	Pfeil, Herman Philadelphia, Pa. Manufacture of tablets, signs, &c	May 22, 1877	1093		11	913
193,723	Pfe har, Frank P., assignor to J. G. English and E. F. Merrick, New Haven, Conn. Latch for carriage-doors	July 31, 1877	1222	367	12	212
196,381	Pfluegner, Otto F., Chicago, Ill. Barbers' chair	Oct. 23, 1877	740	213	12	689
190,978	Pflum, Harry P., assignor of one-half interest to H. Doane, Cincinnati, Ohio. Trundle-toy	May 22, 1877	910	268	11	888
	Pfrunder, Anton. (*See* Schaeffer & Pfrunder.)					
	Pfutzner, John G. (*See* Winter, Carl E. G., assignor.)					
195,392	Phelps, Byron, Decatur, Ill. Marker for hand corn-planters	Sept. 18, 1877	657	195	12	509
	Phelps, Charles, *et al.* (*See* Phelps, Charles H., assignor.)					
195,901	Phelps, Charles H., Philadelphia, Pa., assignor of one-half interest to C. Phelps and E. Draper, Troy, N. Y. Vapor-conductor for cooking-stoves	Oct. 9, 1877	220	62	12	600
7,888	Phelps, Daniel, and C. W. Edmonds, San Francisco, Cal. Fire-alarm-telegraph register (Reissue)	Sept. 18, 1877	703	208 / 209	12	515
	Phelps, Dodge & Co. (*See* Seymour, Frederick J., assignor) (Reissue.)					
186,215	Phelps, George M., Brooklyn, N. Y. Printing-telegraph transmitter	Jan. 16, 1877	405	124	11	78
195,162	Same Magneto-electric transmitter for printing-telegraphs	Sept. 11, 1877	422	125	12	467
196,476	Same Printing-telegraph	Oct. 23, 1877	827	239	12	701
188,666	Phelps, Horace L., Dodge Center, Minn. Draft-equalizer	Mar. 20, 1877	710	217	11	491
189,493	Phelps, Ira M., assignor, by mesne assignments, to S. L. Garrett, Philadelphia, Pa. Safety-valve	Apr. 10, 1877	481	152	11	629
196,039	Phelps, Ira M., Philadelphia, Pa. Pulverizing-mill	Oct. 9, 1877	362	103	12	620
198,413	Phelps, Ira M., assignor of part interest to T. L. Chase and H. J. Fillman, Philadelphia, Pa., and D. K. Allen, Boston, Mass. Roasting ores	Dec. 18, 1877	731	221	12	1067
	Phelps, James T. (*See* Butterfield, George, assignor.)					
194,171	Phelps, Napoleon B., New York, N. Y. Wringing-machine	Aug. 14, 1877	407	122	12	295
197,803	Same Clothes-wringer	Dec. 4, 1877	185	56	12	972
7,873	Phelps, Orson C., deceased, assignor, by mesne assignments, to J. J. Towers, Brooklyn, N. Y. Handcuff (Reissue)	Sept. 20, 1877	202	61	12	428
192,002	Phelps, Samuel A., Syracuse, N. Y. Toe-weight for horses	June 12, 1877	481	148	11	1045
191,463	Phenix, George W., New Brunswick, N. J. Awl-handle	May 29, 1877	1380	416	11	960
	Phenix, Harmon, *et al.* (*See* Curtiss, Marshall S., assignor.)					
186,158	Philbrick, Alvah A., Coldwater, Mich. Vehicle-wheel	Jan. 9, 1877	338	104	11	62
189,650	Philbrick, John W., assignor to S. M. Philbrick, I. S. Bangs, and E. R. Emerson, Waterville, Me. Dredging-machine	Apr. 17, 1877	649	202	11	660
	Philbrick, Samuel M., *et al.* (*See* Philbrick, John W., assignor.)					
195,161	Philbrook, Alfred S., Claremont, N. H. Fire-escape	Sept. 11, 1877	421	125	12	467
191,813	Philbrook, Francis J., assignor to H. L. Leouard, Bangor, Me. Reel for fishing-lines	June 12, 1877	297	92	11	104
191,711	Philleo, William W., and A. W. Cox, Hastings, Nebr., assignors to Sandwich Manufacturing Company, Sandwich, Ill., and T. L. French, Cedar Falls, Iowa. Harvester	June 5, 1877	188	59	11	1002
194,721	Phillippi, George H., assignor of one-half interest to G. W. Phillippi, Buffalo, N. Y. Bung for barrels	Aug. 28, 1877	954	283	12	386
	Phillippi, George W. (*See* Phillippi, George H., assignor.)					
190,513	Phillips, Ambrose A., assignor to self and W. N. Martin, Philadelphia, Pa. Hame-fastener	May 8, 1877	418	122	11	809
195,772	Phillips, Augustus K., Saint Louis, Mo. Ventilating window frame and sash	Oct. 2, 1877	76	23	12	572
	Phillips, Baylies F. (*See* Smerdon & Phillips.)					
190,781	Phillips, Benjamin F., assignor to N. H nry, Lowden, Iowa. Stubble-guard for plows	May 15, 1877	703	207	11	853
194,560	Phillips, Daniel, assignor of two-thirds interest to D. and I. Haines, Collamer, Ind. Cider-press	Aug. 28, 1877	809	241	12	365
	Phillips, Dewey. (*See* Galusha, William M., assignor.)					
195,393	Phillips, Elwood, and T. G. Dunbar, Centreville, Ind. Grain and seed drill	Sept. 18, 1877	658	195	12	509
187,660	Phillips, Fitz E., Barre Center, N. Y. Fastener for hat-cords	Feb. 20, 1877	752	233	11	322
	Phillips, Herbert. (*See* Randall, James H., assignor.)					
193,892	Phillips, James L., Lowville, N. Y. Buckboard-wagon	Aug. 7, 1877	92	29	12	247
	Phillips, James W. (*See* Rock & Phillips.)					
	Same (*See* Stafford & Phillips.)					
	Phillips, Nimick & Co. (*See* Nugent, Richard C., assignor) (Reissue.)					
195,303	Phillips, Oscar F., Lynchburg, Va. Plow	Sept. 18, 1877	577	168	12	497
189,781	Phillips, Phineas W., Salem, Mass. Spring-shade fixture	Apr. 17, 1877	787	242	11	677
194,368	Phillips, Samuel, Paterson, N. J. Passe-partout mat	Aug. 21, 1877	609	183	12	329
	Phillips, Spencer E., *et al.* (*See* Pierson, Charles H., assignor.)					
194,973	Phillips, Thomas, Saint Louis, Mo., assignor of one-half interest to E. Hudspith. Hydrant and plug valve	Sept. 11, 1877	225	70	12	439
	Phillips, William H. (*See* Bevins, Weis & Phillips.)					
196,249	Phillips, Zelora, Prairie County, assignor of one-half interest to M. M. Yeakle, Prairie Center, Ark. Baling-press	Oct. 16, 1877	592	172	12	660
	Phinney, Charles E. (*See* Rumble, Alexander C., assignor.)					
189,257	Phipps, Edward L., Milford, Mich. Harvester-reel	Apr. 3, 1877	224	75	11	583
	Phipps, William A. (*See* Campbell, George, assignor.)					
187,308	Phyfe, William S., New York, N. Y. Corset-clasp	Feb. 13, 1877	393	125	11	267 / 268
187,771	Piaget, Francis H., Albany, N. Y. Window-plant box	Feb. 27, 1877	870	271	11	346
195,642	Piatt, Josiah J., La Porte, Ind. Plow	Sept. 25, 1877	909	270	12	553
192,603	Piburn, Thomas B., Brooklyn, Mo. Gate	June 12, 1877	482	148	11	1045
195,301	Pic, Henry, and M. Nelson, Paris, France, assignors to Veit & Nelson, New York, N. Y. Setting artificial gems	Sept. 18, 1877	578	168	12	497
188,071	Picard, Joseph A., North Platte, Nebr. Car-axle box	Mar. 6, 1877	109	33	11	395
192,932	Pickard, William P., Columbia, Tenn. Vehicle-brake	July 10, 1877	592	117	12	74
197,053	Pickens, John C., Weaverville, N. C. Clothes-pounder	Nov. 13, 1877	337	99	12	816
191,712	Pickens, Pulaski B., New York, N. Y. Paper box	June 5, 1877	189	59	11	1002
	Pickering, Barton, *et al.* (*See* Clayton, Henry, assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page
198,041	Pickering, Carlton E., Hornellsville, N. Y. Thill-coupling	Dec. 11, 1877	337	104	12	1004
	Pickering, D. N. (*See* Fletcher, Karl, assignor.)					
191,464	Pickering, Loring, San Francisco, Cal. Copying-telegraph	May 29, 1877	1380	416	11	960
188,070	Pickering, Oliver, assignor to self and C. E. Keith, Needham, Mass. Brush and cane cutter	Mar. 6, 1877	109	33	11	395
198,311	Pickering, Oliver, Needham, Mass. Level	Dec. 18, 1877	631	192	12	1053
187,772	Pickett, George S., Paoli, Wis. Potato digger, marker, and cultivator	Feb. 27, 1877	871	271	11	346
188,816	Picket, George S., Paoli, Wis. Portable fence	Mar. 27, 1877	881	267	11	523
194,722	Same.....Bed-bottom	Aug. 28, 1877	955	283	12	386
198,677	Pickford, William W., East Palestine, Ohio. Curtain-fixture	Dec. 25, 1877	999	304	12	1115
190,616	Pickhardt, Wilhelm, New York, N. Y. Drier	May 8, 1877	516	153	11	822
196,382	Pickhaver, John T., Ionia, Mich. Carriage-spring	Oct. 23, 1877	740	213	12	689
	Pickles, Charles K. (*See* Grable & Pickles.)					
	Pickman, David, *et al.* (*See* Keating, Daniel E., assignor.)					
187,413	Pictet, Raoul P., Geneva, Switzerland. Producing artificial coal by means of anhydrous sulphurous oxide	Feb. 13, 1877	492	153	11	280
191,778	Same.....Manufacturing sulphurous anhydride	June 12, 1877	260	82	11	1017
186,951	Pielsticker, Carl M., London, England. Refining crude ozokerite	Feb. 6, 1877	37		11	207
	Pieper, Carl. (*See* Grossler, Wilhelm, assignor.)					
8,016	Pierce, Charles D., Philadelphia, Pa. Earth-auger.....(Reissue)	Dec. 25, 1877	1070	325	12	1125
192,713	Pierce, Daniel, Brownington, Vt. Car-mover	July 3, 1877	159	45	12	35
196,309	Pierce, Elijah S., Hartford, Conn. Wood-screw	Oct. 23, 1877	668	193	12	679
	Pierce, Erastus E. (*See* Blakeslee, John R., assignor.)					
193,033	Pierce, George D., Sangerfield, N. Y. Twine-holder for stringing hop-yards	July 10, 1877	488	147	12	87
187,481	Pierce, George W., Albany, N. Y. Dish-stand	Feb. 20, 1877	578	179	11	299
	Pierce, James D. (*See* Vose & Pierce.)					
190,075	Pierce, James D., assignor of one-half interest to Dutcher, Vose & Adams, Milwaukee, Wis. Fare-box	Apr. 24, 1877	1114	339	11	727
188,667	Pierce, John A., and F. E. Smiley, Philadelphia, Pa. Carbureter	Mar. 20, 1877	710	218	11	492
195,044	Pierce, John B., Buffalo, N. Y. Joint for hot-air furnaces	Sept. 11, 1877	302	91	12	449
187,309	Pierce, Samuel H., assignor of one-half interest to C. Tupper, Galesburg, Ill. Draft-equalizer	Feb. 13, 1877	394	125	11	268
190,247	Pierce, William, Stoneham, Mass. Strawberry and vegetable cultivator	May 1, 1877	130	39	11	763
197,795	Pierce, William H., Tolono, Ill. Valve-gear	Dec. 4, 1877	91	28	12	958
193,034	Pierson, Charles H., assignor of one-third interest to S. E. Phillips and W. Puffer, Janesville, Wis. Carbureting-machine	July 10, 1877	489	147	12	87
	Pierson, Henry M., *et al.* (*See* Strong, Wynn H., assignor.)					
192,185	Piggott, Joseph T., and A. W. Hoyt Newbern, Ill. Gate	June 19, 1877	690	211	11	1084
	Pike, Albert L. F. (*See* Sampson, Winslow F., assignor.)					
191,365	Pike, Amasa H., Chicago, Ill. Bosom-form	May 29, 1877	1283	387	11	948
	Pike, Charles F. (*See* Henis & Pike.)					
196,764	Pike, Charles F., Philadelphia, Pa. Steam-trap	Nov. 6, 1877	27	8	12	764
190,690	Piles, Isaac, Yankton, Dak. Picture-hanger	May 15, 1877	614	183	11	842
186,059	Pilger, Leonard H., Philadelphia, Pa. Lamp-extinguisher	Jan. 9, 1877	251	75	11	50
	Pilkington, Hugh L., *et al.* (*See* Monteith, Robert H., assignor.)					
189,902	Pillard, Oliver E., New Britain, Conn., and E. M. McPherson, Boston, Mass. Combination-lock	Apr. 24, 1877	931	284	11	704
	Pilliner, Alfred C. (*See* Hill, Pilliner & Williams.)					
	Pillsbury, Ithamar P., *et al.* (*See* Eichholtz, Mathias, assignor).....(Reissue.)					
	Same (*See* Pattee, Henry H., assignor.)					
	Same.....(*See* Pattee, James H., assignor.)					
195,394	Pim, John, Erie, Pa. Organ-reed	Sept. 18, 1877	660	195	12	509
	Pinckus, Florien G. (*See* Bridge, Edward W., assignor.)					
7,914	Pine, James, Troy, N. Y. Harvester.....(Reissue)	Oct. 16, 1877	631	182	12	665
189,134	Pine, James K. P., Lansingburg, N. Y. Standing collar	Apr. 3, 1877	105	38	11	573
193,382	Pinney, Emerson D., and A. L. Hodge, Aurora, Ill. Ticket-holder	July 24, 1877	869	266	12	154
190,979	Pintsch, Richard, Berlin, Prussia. Floating signal-light	May 22, 1877	910	269, 270	11	888
	Pioneer Brass Works. (*See* Hanning, John G., assignor.)					
	Piper, Anson S., *et al.* (*See* Nelson, Nels. P., assignor.)					
186,690	Piper, Francis M., West orough, Mass. Cover for bottle-tops	Jan. 30, 1877	893	276	11	163
	Piper, H. B. (*See* Neracher, William, assignor.)					
	Same.....same.....(Reissue.)					
	Piper, Seth, *et al.* (*See* Nelson, Nels P., assignor.)					
	Piper, Thomas, *et al.* (*See* Nelson, Nels P., assignor.)					
191,880	Pirch, August, Denver, Colo. Combined ditching-gang and shovel-plow	June 12, 1877	360	111	11	1029
187,982	Pirsson, Robert L., and J. S. Oliver, New York, N. Y. Coupling for pipes	Mar. 6, 1877	25	7	11	384
197,491	Pitcher, Jonathan E., Madison, Ind., assignor of one-half interest to T. T. and H. B. Crittenden, Washington, D. C. Invalid-chair	Nov. 27, 1877	812	242	12	903
197,492	Same.....Convertible rocking-chair and crib	Nov. 27, 1877	813	242, 243	12	907
	Pitcher, Richard L. (*See* Elwood & Pitcher).....(Reissue.)					
186,872	Pittman, William, and C. F. Jacobson, New York, N. Y. Game apparatus	Jan. 30, 1877	1077	333	11	187
	Pitner, Henry B. (*See* Croft & Pitner.)					
193,280	Pitt, James H., Bellaire, Ohio. Lubricating compound	July 17, 1877	753		12	130
	Pitt, Thomas, *et al.* (*See* Farquharson, John, assignor.)					
	Pitts, Edward J. (*See* Jennings, Linnæus C., assignor.)					
188,177	Pitts, George, Providence, R. I., assignor of two-thirds interest to J. L. and G. L. Mason. Sleeve-button and stud	Mar. 6, 1877	210	65	11	408
198,149	Pitts, George, assigner of two-thirds interest to J. L. and G. L. Mason, Providence, R. I. Stud and button	Dec. 11, 1877	445	139	12	1019
191,548	Pitts, John H., San Francisco, Cal. Baking-pan	June 5, 1877	40	12	11	982
	Pittsburg Chain and Car Link Manufacturing Company. (*See* Cershey, Benjamin, assignor.)					
	Pittsburg Steel Casting Company. (*See* McCune, William H., assignor.)					
	Pizzini, Paul. (*See* Tabony, Joseph H., assignor.)					
192,004	Plagge, Charles, New York, N. Y. Automatic sugar-purging apparatus	June 12, 1877	482	148	11	1045
196,930	Planck, John, assignor of one-half interest to B. A. Tharp and J. P. Hartzler, Constantine, Mich. Millstone-driver	Nov. 6, 1877	203	59	12	788
191,881	Plano, John, Belvidere, Ill. Iron post for wire fences	June 12, 1877	361	111	11	1029
196,040	Plante, Holland P., New York, N. Y. Fabric for surgeons' bandages	Oct. 9, 1877	363	104	12	620
	Plass, Reuben H. (*See* Towle and Plass.)					
193,518	Plass, Reuben H., and H. McManus, New York, N. Y.; said McManus assignor to said Plass. Gas-governor	July 24, 1877	1031	310	12	176

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Month'y volume. Spec.	Dr'g.	Official Gazette. Vol.	Page.
195,645	Platt, Thomas A., Brooklyn, N. Y. Self-adjusting eye-shade	Sept. 11, 1877	303	92	12	449
	Platt, William. (*See* Lapham, Rufus, assignor.)					
192,347	Plant, Jacob A., Danbury, Conn. Combined lamp and gas lighter	June 26, 1877	888	267	11	1121
	Pleasance, Benjamin J. (*See* Burden & Pleasance.)					
	Pleitz, Adolph F. (*See* Caldwell & Pleitz.)					
187,903	Pleukharp, James, Columbus, Ohio. Corn-harvester	Feb. 27, 1877	1003	310	11	363, 364
188,668	Same..... Screw	Mar. 20, 1877	711	218	11	492
195,305	Plimpton, Henry R., Boston, Mass. Counter-balance for elevators	Sept. 18, 1877	579	169	12	497
190,980	Plimpton, Linus B., Hartford, Conn. Paper box	May 22, 1877	912	270	11	889
190,981	Same.....same	May 22, 1877	913	270	11	889
189,955	Plockross, Waldemar F., Fagundus, Pa. Pumping apparatus	Apr. 24, 1877	976	299	11	711
	Plott, W. D. (*See* Myers, Samuel, assignor.)					
193,345	Plumacher, Eugene H., Nashville, Tenn. Percussion-fuse for shells	July 24, 1877	835	256	12	149
	Plume & Atwood Manufacturing Company. (*See* Atwood, Lewis J., assignor.)					
	Plummer, Charles H. (*See* Merrill & Utter, assignors.)					
7,725	Plummer, Jerome H., Brooklyn, N. Y. Scroll-sawing machine.....(Reissue)	June 5, 1877	225	71	11	1007
7,726	Same.....same.....(Reissue)	June 5, 1877	226	71	11	1007
194,341	Plummer, Osgood, Worcester, Mass. Universal chuck for lathes	Aug. 21, 1877	554	167	12	322
195,948	Plummer, William S., Portland, Oreg. Fruit-drier	Oct. 9, 1877	271	76	12	607
191,072	Same.....same	May 22, 1877	998	297	11	900, 901
	Plunkett, Francis T. (*See* Arbogast, Philip, assignor.)					
193,312	Plympton, Nathaniel, Boston, Mass. Tea-pot, &c	Dec. 18, 1877	631	192	12	1053
192,387	Poetz, John, Shakopee, Minn. Walking-cultivator	June 26, 1877	930	279	11	1127
194,108	Same.....Cultivator	Aug. 14, 1877	343	102	12	286
191,612	Poggenpohl, Henrich F., Iowa City, Iowa. Bee-hive	June 5, 1877	94	29	11	987
195,643	Poh, Louis, and C. Shoop, Buffalo, N. Y. Hose-nozzle	Sept. 25, 1877	910	271	12	553
191,172	Pohl, Albert, New York, N. Y. Game-counter	Aug. 14, 1877	409	122	12	295
189,782	Pohley, Frederick, San Francisco, Cal. Water-closet	Apr. 17, 1877	768	242	11	677
197,894	Pohlig, Julius, Siegen, Prussia. Steam-boiler furnace	Dec. 4, 1877	186	57	12	972
195,641	Poincot, Etienne, assignor of one-half interest to E. Leboeuf, Houma, La. Motor for operating cross-cut saws, &c	Sept. 25, 1877	911	271	12	553
192,451	Pointon, Philip, assignor to self and E. Bennett, Baltimore, Md. Roofing-tile	June 26, 1877	985	296	11	1135
198,414	Pointon, Philip, assignor of one-half interest to E. Bennett, Baltimore, Md. Roofing-tile	Dec. 18, 1877	732	221	12	1067
194,261	Poirier, Laurent, Paris, France. Bronzing-machine	Aug. 14, 1877	488	147, 148	12	306
	Poland, Benjamin. (*See* Ashworth, John, assignor.)					
188,536	Poland, James P., Arlington, Mass. Brush	Mar. 20, 1877	584	181	11	474
196,167	Same.....same	Oct. 16, 1877	505	147	12	648
188,072	Poland, Tunis H., Farmersville, Tex. Hame-fastener	Mar. 6, 1877	110	33	11	395
186,613	Pole, Benjamin C., Washington, D. C. Railway-ticket	Jan. 23, 1877	812	251, 252	11	143
191,254	Same.....Ticket printing and recording	May 29, 1877	1188	357	11	935
	Pollack, William E. (*See* Guels, Herman, assignor.)					
194,928	Pollak, Joseph, assignor to A. Redlich and A. Schnitzler, New York, N. Y. Cigarette-machine	Sept. 4, 1877	172	53	12	424
188,669	Pollard, James M., New Orleans, La., assignor of three fourths interest to W. L. McNeely, J. D. Milburn, and T. M. McNeely. Bale-tie	Mar. 20, 1877	712	218	11	492
190,076	Pollard, James M., assignor to self, W. L. McNeeley, New Orleans, La., and J. D. Milburn, Memphis, Tenn. Bale-tie	Apr. 24, 1877	1116	339	11	723
192,005	Pollard, James M., New Orleans, La. Fire-extinguisher	June 12, 1877	485	149	11	1045
187,670	Polley, Orson H., and D. W. Toles. Plymouth, Mich. Earth-auger	Feb. 20, 1877	732	233	11	322
	Pollock, Anthony, administrator. (*See* Marsden, Henry R.)					
189,494	Pollock, James R., Mansfield, Ohio. Suspenders	Apr. 10, 1877	482	153	11	629
	Pollock, John A. (*See* Travis, Thomas W., assignor.)					
	Polo Harvester Company. (*See* McCollom, George W., assignor.)					
190,446	Pond, Charles L., Buffalo, N. Y. Attaching labels	May 8, 1877	349	102	11	800
188,179	Pond, Chester H., assignor of one-half interest to C. R. Knickerbocker and D. Gibson, Jackson, Mich. Fire-alarm-telegraph repeater	Mar. 6, 1877	212	65, 66, 67	11	408
188,180	Same.....Fire-alarm-telegraph signal-box	Mar. 6, 1877	215	67	11	408
188,181	Pond, Chester H., assignor to Michigan Fire-Alarm Company, Jackson, Mich. Fire-alarm-telegraph repeater	Mar. 6, 1877	217	68	11	409
188,182	Same.....Signal-box for fire-alarm telegraphs	Mar. 6, 1877	218	68	11	409
188,183	Pond, Chester H., Detroit, Mich., assignor to Michigan Fire Alarm Company, Jackson, Mich. Bell-striker for fire-alarm telegraphs	Mar. 6, 1877	219	68, 69	11	409
187,482	Pond, Henry A., Bristol, Conn., assignor to H. A. Seymour, jr., Washington, D. C. Bail-ear	Feb. 20, 1877	579	179	11	299
188,671	Pond, Henry E., Franklin, Mass. Signal-lantern	Mar. 20, 1877	713	219	11	492
	Pond, Milo B., *et al.* (*See* Groat, Elias, assignor.)					
190,691	Ponsard, August, Paris, France. Removable-hearth metallurgic furnace	May 15, 1877	614	183	11	842
196,383	Pomeroy, David, San Francisco, Cal. Machine for making barrel-heads	Oct. 23, 1877	741	213	12	689
192,875	Pomeroy, Edward P., Springfield, Mass. Window-screen	July 10, 1877	345	101	12	67
186,161	Pomeroy, Hiram S., New Haven, Conn. Reversible latch	Jan. 9, 1877	342	105	11	62
192,185	Pomeroy, Julius T., Edgerton, Wis. Thill-coupling	June 19, 1877	960	212	11	1084
	Pommer, Charles F. (*See* Hoffman & Pommer.)					
189,573	Pool, Cyrus, Ottawa, Ill. Gate	Apr. 17, 1877	579	180	11	659
195,949	Pool, James, Friendsville, Ill. Walking-cane	Oct. 9, 1877	271	77	12	607
192,526	Pool, Solomon N., jr., Alpharetta, Ga. Circular-saw	June 26, 1877	1062	320	11	1144
	Pool, William D., trustee. (*See* Baker, Henry D., assignor.)					
188,670	Poole, Alfred D., Wilmington, Del. Buffing, or take-off roll for finishing printed paper	Mar. 20, 1877	713	218	11	492
195,046	Poole, Ferdinando, and W. A. Pendergraft, Agusta, Kans. Hedge-fence layer	Sept. 11, 1877	303	92	12	449
7,809	Poole, J. Morton, Wilmington, Del., assignor to self, W. T. Porter, and T. S. Poole. Grinding machine.....(Reissue)	July 24, 1877	1079	323	12	181
7,978	Poole, J. Morton, assignor to self, W. T. Porter, and T. S. Poole, Willlmington, Del. Machine for grinding objects cylindrically.....(Reissue)	Dec. 4, 1877	221	68	12	977
194,879	Poole, J. Morton, Wilmington, Del. Surfacing stone	Sept. 4, 1877	122	37	12	417
189,876	Poole, John, Cleveland, Ohio. Wash-board	Apr. 24, 1877	905	277	11	701
193,421	Poole, John T., assignor to S. J. Parsons, Benton, New Brunswick. Last	July 24, 1877	907	276	12	159
	Poole, Joseph F. (*See* Gillett & Poole.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
186,873	Poole, Joseph F., assignor of one-half interest to E. C. Gillett, Monroe, Wis. Combined cultivator and corn-planter	Jan. 30, 1877	1078	333	11	187
186,614	Poole, Lemon, assignor of one-half to H. C. Trout, Springfield, Ohio. Grain-register	Jan. 23, 1877	815	252	11	143
188,178	Poole, Middleton, assignor of one-half interest to W. McCrory, Columbus, Ohio. Track-clearer	Mar. 6, 1877	211	65	11	408
7,995	Poole, Samuel, Brooklyn, N. Y. Meat-holder (Reissue)	Dec. 18, 1877	761	230	12	1072
191,367	Same same	May 29, 1877	1284	388	11	948
195,306	Same Toaster and broiler	Sept. 18, 1877	581	169	12	497
198,313	Same Fork for pickles, &c.	Dec. 18, 1877	632	192	12	1053
198,678	Same Nut-cracker and pick	Dec. 25, 1877	1000	304	12	1115
	Poole, Thomas S., *et al.* (*See* Poole, J. Morton, assignor) (Reissue.)					
193,383	Poore, Townsend, Scranton, Pa. Balanced valve for steam-engines	July 24, 1877	870	266	12	154
	Pope, Alfred A. (*See* Simpson & Pope.)					
193,549	Pope, Anthony, Allegheny, assignor of one-half interest to W. M. McKelvy, Pittsburg, Pa. Butter-firkin	July 24, 1877	1032	310	12	176
7,621	Pope, Frank L., Elizabeth, and T. A. Edison, Menlo Park, N. J., assignors, by mesne assignments, to Gold and Stock Telegraph Company. Printing telegraph. (Reissue)	Apr. 17, 1877	854	262	11	686
194,170	Pope, Irving W., Chagrin Falls, Ohio. Paper bag	Aug. 14, 1877	407	122	12	295
191,814	Pope, John L., Cleveland, Ohio. Pulley-block	June 12, 1877	297	92	11	1021
189,258	Pope, Richard C., Saint Louis, Mo. Bale-tie	Apr. 3, 1877	225	76	11	589
195,164	Same same	Sept. 11, 1877	425	126	12	468
195,533	Pope, Thomas L., Waubeck, Iowa. Fence-post	Sept. 25, 1877	805	238	12	538
195,395	Pope, Wilie D., assignor of two-thirds interest to R. O. Randall, Gladsden, Ala. Reclining rocking-chair	Sept. 18, 1877	661	196	12	509
189,135	Popplewell, Theodore S., assignor of one-half interest to H. J. Linderberry, Ithaca, N. Y. Rowlock	Apr. 3, 1877	106	38	11	573
	Poret, Edouard. (*See* Rogé, Poret, Baffey & Dupré.)					
196,384	Porteous, John, Cincinnati, Ohio, assignor to H. J. Bailey, Pittsburg, Pa. Hydrant	Oct. 23, 1877	742	214	12	689
194,615	Porteous, William, Pittsburg, Pa. Hydrant-valve	Aug. 28, 1877	856	255	12	372
195,163	Porteous, William, and A. B. Roney, Pittsburg, Pa. Stop and waste cock	Sept. 11, 1877	423	126	12	467
	Porter, Alexander F. (*See* Witsil, George L., assignor.)					
188,538	Porter, Alfred, and J. A. Clark, Manchester, N. H. Loom-temple	Mar. 20, 1877	586	181	11	474
198,150	Porter, Alonzo W., New York, N. Y. Plastic jacket and condenser for carbureters	Dec. 11, 1877	446	139	12	1019
	Porter, Cyrus H. (*See* Tapley & Porter.)					
192,452	Porter, Daniel R., Leon, Iowa. Blow-pipe	June 26, 1877	786	296	11	1135
	Porter, D'Arcy. (*See* Baker & Porter.)					
188,537	Porter, D'Arcy, assignor to White Sewing Machine Company, Cleveland, Ohio. Sewing-machine	Mar. 20, 1877	585	181	11	474
190,361	Porter, Francis, Ticonderoga, N. Y., assignor to New York Ore Separator Company. Metal composition	May 1, 1877	242		11	778
	Porter, George A. (*See* Barber & Porter.)					
	Porter, George D. (*See* Libby, Caleb A., assignor.)					
186,016	Porter, Henry K., Boston, Mass. Mechanical movement	Jan. 9, 1877	208	63	11	45
196,477	Same Carriage-top iron	Oct. 23, 1877	829	239	12	701
196,478	Same Spring shackle-link	Oct. 23, 1877	831	239	12	702
198,042	Same Whiffletree-coupling	Dec. 11, 1877	337	105	12	1004
194,262	Porter, John, Convis, Mich. Hay-rack	Aug. 14, 1877	490	148	12	307
187,234	Porter, John D., Woburn, Mass. Ice-creeper	Feb. 13, 1877	317	102	11	257
192,279	Porter, John E., Cherokee Station, Kans. Sulky plow	June 19, 1877	792	241	11	1097
196,385	Porter, John F. F., assignor to self and H. R. Meores, Booneville, Miss. Fastener for colters and plow-standards	Oct. 23, 1877	743	214	12	690
	Porter Manufacturing Company, *et al.* (*See* Barber & Porter, assignors.)					
190,897	Porter, Nathan T. and T., New York, N. Y. Sewing-thimble	May 15, 1877	806	238	11	867
	Porter, Thomas. (*See* Porter, Nathan T. and T.)					
	Porter, T. R., *et al.* (*See* Wright, William A., assignor.)					
194,462	Porter, William D., McComb, Ohio. Cloth-measuring machine	Aug. 21, 1877	706	210	12	342
192,006	Porter, William J., New York, N. Y. Loom for weaving hair-cloth	June 12, 1877	487	149	11	1045
	Porter, William T., *et al.* (*See* Poole, J. Morton, assignor) (Reissue.)					
186,366	Porterfield, William H., and H. C. Malin, Belmont, Ohio. Sheep-shears	Jan. 16, 1877	562	171	11	97
197,494	Posey, James, Nanjemoy, Md. Plow	Nov. 27, 1877	816	243	12	904
191,255	Possolt, Ernest, Bradford, England. Manufacture of woven fabrics	May 29, 1877	1190		11	935
	Post & Co. (*See* Kirby, John, jr., assignor.)					
190,617	Post, Albert E., assignor of one-third interest to A. E. Spencer, Syracuse, N. Y. Fare-register	May 8, 1877	517	154	11	822
192,187	Post, Charles B., New London, Ohio. Thill-coupling	June 19, 1877	691	212	11	1084
198,212	Post, Edward E., Lewiston, Me., and E. W. Furbush, Freedom, N. H. Steam-cooking	Dec. 18, 1877	530	163	12	1038
195,307	Post, Grotus, assignor of one-half interest to J. W. Post, Paterson, N. J. Pipe-cutter	Sept. 18, 1877	581	170	12	497
	Post, James F., *et al.* (*See* Wells, Isaac, assignor.)					
	Post, James W. (*See* Post, Grotus, assignor.)					
	Post, John W. (*See* Dartt & Post.)					
186,615	Post, John W., New York, N. Y. Carriage	Jan. 23, 1877	816	252, 253	11	143
189,385	Same Carriage-top and shifting seat-rail	Apr. 10, 1877	376	121	11	616
189,783	Same Parlor-skate	Apr. 17, 1877	789	242, 243	11	677
198,211	Same Metal turning lathe	Dec. 18, 1877	527	163	12	1038
191,289	Potter, Charles, jr., Plainfield, N. J. Printing-press	May 29, 1877	1224	367	11	939
194,532	Potter, Frederick, Beardstown, Ill. Chain-pump bucket	Aug. 28, 1877	784	233	12	362
195,230	Potter, Frederick C., Poughkeepsie, N. Y. Thill-coupling	Sept. 18, 1877	505	148	12	487
7,796	Potter, James, Chicago, Ill. Leather-cutting gage (Reissue)	July 17, 1877	790	242	12	135
194,048	Potter, Morton, and S. H. Barnebee, Mendon, Mich. Bee-hive	Aug. 14, 1877	270	80	12	278
191,616	Potter, Thomas O., Boston, Mass. Suspenders	Aug. 28, 1877	857	255	12	372
187,310	Potter, Warren B., Boston, Mass. Voltaic plaster	Feb. 13, 1877	395	125	11	268
	Potter, Millard F., *et al.* (*See* Martin, Ara T., assignor.)					
191,779	Pottier, Charles, assignor of one-half interest to P. A. V. Le Lubez, London, England. Hot-air apparatus	June 12, 1877	261	82	11	1017
186,616	Potts, Benjamin J., Williamsport, Ohio. Scaffolding	Jan. 23, 1877	818	253	11	143
190,248	Potts, Stacy, Philadelphia, Pa. Artificial flower	May 1, 1877	130	39	11	763
190,514	Potwin, William S., Chicago, Ill. Coal-hod	May 8, 1877	419	122	11	809
195,950	Same Coal-oil stove	Oct. 9, 1877	272	77	12	607
	Pouget, François. (*See* Febore, Pouget & Bonniet.)					
197,402	Poulson, Britton, Fort Wayne, Ind. Ruffler for sewing-machines	Nov. 20, 1877	706	211	12	880

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Drg.	Vol.	Page.
	Poultney, Thomas. (*See* Clarke, Henry, assignor.)					
	Pound Manufacturing Company. (*See* Hinman, Franklin, assignor.)					
188,480	Powell, Abraham, Philadelphia, Pa., assignor of one-half interest to D. M. Molyneaux, Bordentown, N. J. Packing for man-holes, hand-holes, &c	Mar. 20, 1877	535	164	11	467
	Powell, David. (*See* Caler & Powell.)					
195,645	Powell, Edward L., and E. Seddon, Drifton, Pa. Miners' drill	Sept. 25, 1877	911	271	12	554
189,651	Powell, James, Cincinnati, Ohio. Lubricator for steam-engines	Apr. 17, 1877	649	203	11	660
189,652	Same.....Chuck for gas and water fittings	Apr. 17, 1877	654	203	11	660
192,657	Same.....Sand-core box	July 3, 1877	108	31	12	27
192,658	Same.....Cock and valve	July 3, 1877	111	31	12	27
188,407	Powell, John A., assignor to self and J. B. Crowthers, California, Pa. Spike-extractor	Mar. 13, 1877	451	140	11	447
	Powell, John F. (*See* Stevens, Homer S., assignor.)					
190,362	Powell, John G., Philadelphia, Pa. Toy watch	May 1, 1877	242	72	11	778
194,173	Powell, Thomas, Philadelphia, Pa. Burglar-alarm	Aug. 14, 1877	409	123	12	295
189,495	Powell, William H., Belleville, Ill. Pile for nail-plates	Apr. 10, 1877	483	153	11	629
196,386	Powell, William J., Marshfield, Mass. Cotton-harvester	Oct. 23, 1877	744	214	12	690
	Power, J. L. (*See* Cornish, Benjamin F., assignor.)					
	Powers, Anna, executrix. (*See* Powers, Timothy J.)	(Reissue.)				
198,151	Powers, Benjamin F., and G. E. Needham, Cleveland, Ohio. Car-roof	Dec. 11, 1877	448	140	12	1019
198,152	Powers, Calvin S., Fountain, Minn. Electro-vapor bath	Dec. 11, 1877	448	140	12	1020
188,943	Powers, Charles T., Sheffield, Great Britain, assignor to W. Jones, Lancaster, England. Bobbin-winder for sewing-machines	Mar. 27, 1877	997	306	11	539
191,815	Powers, Daniel, Shelburne Falls, Mass. Bit-stock	June 12, 1877	298	92	11	1021
7,518	Powers, David J., assignor to Union Wire Mattress Company, Chicago, Ill. Sofa-bedstead	(Reissue) Feb. 20, 1877	779	242	11	326
186,162	Powers, Jay W., assignor of one-half interest to F. M. Melick, Chicago, Ill. Fruit and jelly press	Jan. 9, 1877	343	105	11	63
187,773	Powers, Jay W., assignor of one-half interest to Frank M. Melick, Chicago, Ill. Monkey-wrench	Feb. 27, 1877	872	272	11	346
185,960	Powers, John H., Cincinnati, Ohio. Crib	Jan. 2, 1877	149	45	11	28
	Powers Paper Company. (*See* Heath, Lorenzo P., assignor.)					
188,184	Powers, Theodore D., assignor to J. A. Field, Saint Louis, Mo. Grinding-mill	Mar. 6, 1877	220	69	11	409
7,570	Powers, Timothy J., deceased, by A. Powers, executrix, New York, N. Y. Paper box. (Reissue)	Mar. 27, 1877	1063	327	11	548
197,403	Powers, Titus, and J. B. Hulbert, New York, N. Y., assignors to selves and I. M. Gazzam, Jersey City, N. J. Time gas lighting and extinguishing apparatus	Nov. 20, 1877	707	211, 212	12	880
193,671	Powers, Titus, New York, N. Y., and C. C. Gilman, Eldora, Iowa. Safety-car	July 31, 1877	1180	353	12	206
197,404	Powers, Titus, assignor to self, J. R. Hulbert, and I. M. Gazzam, New York, N. Y. Gas-lighting apparatus	Nov. 20, 1877	708	212	12	880
193,346	Powlett, James A., assignor to J. P. Hopkins, San Francisco, Cal. Copying-press	July 24, 1877	836	256	12	149
	Pownall, Joseph D. C. (*See* Mercer & Pownall.)					
188,753	Pownall, Joseph D. C., and H. Broomell, Christiana, Pa. Animal-trap	Mar. 27, 1877	803	246	11	513
186,952	Poznanski, Joseph, New York, N. Y. Tooth-pick holder	Feb. 6, 1877	88	14	11	207
187,311	Prahar, Louis, New York, N. Y. Double-acting press	Feb. 13, 1877	395	125	11	268
197,563	Same..... Clasp for pocket-books	Nov. 27, 1877	888	264	12	914
196,765	Prall, William E., New York, N. Y. Reflector for gas-burner	Nov. 6, 1877	27	8	12	765
	Pramann, Adolphus. (*See* Trinks & Pramann.)					
	Prang & Co., L. (*See* Springer, George H., assignor.)					
191,465	Prath, John F., Chicago, Ill. Kettle-furnace	May 29, 1877	1382	417	11	960
192,876	Prather, Amos W., Lineville, Iowa. Stock-feeder	July 10, 1877	346	102	12	67
194,369	Prather, Amos W., and D. D. Shirley, Lineville, Iowa. Automatic fan	Aug. 21, 1877	610	183	12	329
186,496	Prather, Thomas W., Union Depot, Tenn. Plug-tobacco machine	Jan. 23, 1877	700	215	11	127
	Pratt & Letchworth. (*See* Latta, Emmit G., assignor.)					
	Same (*See* Stickney, Stephen W., assignor.)					
	Same (*See* Van Keuren, William F., assignor.)					
	Pratt & Whitney Company. (*See* Bishop & Johnson, assignors.)					
	Same.. .. (*See* Pratt & Reynolds, assignors.)					
185,961	Pratt, Benjamin F., Greenup, Ky. Scoop	Jan. 2, 1877	150	45	11	28
195,396	Pratt, Edwin S., Buffalo, N. Y. Folding-chair	Sept. 18, 1877	662	196	12	509
7,795	Pratt, Elias B., Norwood, Mass. Car-door-hanging device	(Reissue) July 17, 1877	789	242	12	135
187,556	Pratt, Francis, Pawtucket, R. I. Paper-yarn spool	Feb. 20, 1877	643	200	11	308
189,057	Pratt, Francis A., and J. R. Reynolds, assignor to Pratt & Whitney Company, Hartford, Conn. Machine for varnishing the interior of cartridge-shells	Apr. 3, 1877	43	15, 16	11	565
185,962	Pratt, George M., Middletown, Conn. Sewing-machine	Jan. 2, 1877	151	46	11	28
194,109	Pratt, Henry L., Brooklyn, N. Y. Drill-chuck	Aug. 14, 1877	344	103	12	286
	Pratt, James H., *et al.* (*See* Pratt, Jonah, jr., assignor.)					
190,364	Pratt, Jonah, jr., Princeville, Ill., assignor of two-thirds interest to J. A. and O. S. Pratt. Three horse equalizer	May 1, 1877	244	72	11	778
195,902	Pratt, Milon, assignor to Pratt, Read & Co., Deep River, Conn. Machine for smoothing ivory key-boards	Oct. 9, 1877	221	63	12	600
	Pratt, Nathaniel W. (*See* Goubert & Pratt.)					
	Pratt, Oliver S., *et al.* (*See* Pratt, Jonah, jr., assignor.)					
	Pratt, Pascal P. (*See* Kayser, A., assignor.					
	Pratt, Read & Co. (*See* Pratt, Milon, assignor.)					
	Same.....(*See* Wilder & McNeil, assignors.)					
	Pratt, Ulysses. (*See* Lord, John P., assignor)	(Reissue.)				
	Same.....(*See* Needham, Elias P., assignor)	(Reissue.)				
190,363	Pratt, Ulysses, Deep River, Conn. Piano-forte key	May 1, 1877	243	72	11	778
	Pray, Joseph F., *et al.* (*See* Johnson, Daniel A., assignor)	(Reissue.)				
191,466	Preater, James H., Brooklyn, assignor to self, A. E. Gillies, and M. Simons, New York, N. Y. Cigar-box	May 29, 1877	1383	417	11	961
195,165	Preisendauz, Gottlieb, assignor of one-half interest to J. E. Clandin, Gridley, Ill. Hog-cholera medicine	Sept. 11, 1877	426		12	468
192,007	Prentice, Charles F., New York, N. Y. Portable folding boat	June 12, 1877	488	149, 150	11	1045
187,774	Prentice, James H., Saginaw, Mich. Car-stove	Feb. 27, 1877	873	272	11	347
186,874	Prentice, Miles S., assignor to self and T. Hennessey, Rockford, Ill. Spike-puller	Jan. 30, 1877	1079	334	11	187
	Prentice, Vernon F. (*See* Worcester & Prentice.)					
188,185	Prentis, Charles, 2d, New London, Conn. Sponge-cup	Mar. 6, 1877	221	69	11	409
7,636	Prentiss, Charles H., Cleveland, Ohio, assignor, by mesne assignments, to M. L. Hull. Gas-heater	(Reissue) Apr. 24, 1877	1174	355	11	736
194,561	Prentiss, Charles H., Cleveland, Ohio. Vapor-burner	Aug. 28, 1877	810	241	12	366
198,679	Prentiss, Junius P., Fall River, Mass. Carpet beating and cleaning machine	Dec. 25, 1877	1000	304	12	1115
7,697	Prentress, Henry N., Dunleith, Ill. Wire fence barb	(Reissue) May 22, 1877	1149	344	11	921

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
191,713	Presbrey, Charles H., Sterling, Ill. School-desk	June 5, 1877	189	60	11	1002
196,990	Prescott, Edwin, Hampton Falls, N. H. Hanger for doors, gates, &c.	Nov. 13, 1877	272	80	12	806
	Prescott, George B. (*See* Smith, Gerritt, assignor.)					
190,898	Prescott, George B., New York, N. Y. Quadruplex telegraph	May 15, 1877	807	239	11	867
	Prescott, Oliver P. (*See* Robinson, Martin W., assignor.)					
	Prescott, William P. (*See* Evans & Prescott.)					
190,365	Presko, Frederick A., New York, N. Y. Running-gear for vehicles	May 1, 1877	245	73	11	778
	Pressure Extract Company. (*See* Miller, Jonathan, assignor) (Reissue.)					
193,177	Preston, Edward F., Charlotte, Mich. Milk-cooler	July 17, 1877	637	193	12	115
	Preston, Francis B. (*See* Heptonstall & Preston.)					
191,882	Preston, Francis B., Fayette, Mo. Hand seed-planter	June 12, 1877	361	112	11	1029
188,539	Preston, James A., Oxford, N. Y. Milk-strainer	Mar. 20, 1877	587	181	11	475
192,933	Preston, James P., Gold Run, Cal. Wind-wheel	July 10, 1877	394	117	12	74
189,136	Preston, John, Millford, Ky. Plow	Apr. 3, 1877	106	38	11	573
192,348	Preston, Simon M., Grinnell, Iowa. Stand for holding funnels, measures, &c	June 26, 1877	889	267	11	1122
186,875	Price, George L., Orleans, N. Y. Lap-board	Jan. 30, 1877	1080	334	11	187
195,047	Price, George W., Lakeland, assignor to self and W. H. Sanford, Hauppauge, N. Y. Horseshoe attachment	Sept. 11, 1877	305	92	12	449
195,397	Price, Henry C., New York, N. Y. Water-closet	Sept. 18, 1877	662	196	12	510
194,463	Price, James W., Michigantown, Ind. Grain-toller for grist-mills	Aug. 21, 1877	707	211	12	342
198,153	Price, John B., Thompsonville, Conn., assignor to Weed Sewing Machine Company. Bobbin-winder	Dec. 11, 1877	450	140	12	1020
193,830	Price, John F., Lincoln, Tenn. Cotton harrow and chopper	Aug. 7, 1877	33	11	12	239
	Price, Vincent C., *et al.* (*See* Atwood, Corydon F., assignor) (Reissue.)					
	Price, William E. (*See* Hendricks, Theodore, assignor.)					
187,046	Prichard, George, and J. Kienardt, assignors to N. Botsford, Lockport, N. Y. Carpet-stretcher	Feb. 6, 1877	126	41	11	219
194,929	Prillaman, Medad, assignor of one-half interest to J. P. Saul, Callaway's, Va. Shingle-sawing machine	Sept. 4, 1877	173	54	12	424
	Primble, James R. (*See* Cather, Edwin, assignor.)					
189,784	Prince, Frederick, Patcham, England. Picture-exhibitor	Apr. 17, 1877	791	243	11	677
	Prindle & Co., *et al.* (*See* Ray, Samuel, assignor.)					
	Prindle, Edward T. (*See* Benedict, Elias U., assignor.)					
190,982	Prindle, Edward T., assignor of one-half interest to S. W. Thatcher, Aurora, Ill. Carpet-sweeper	May 22, 1877	914	270, 271	11	889
	Prindle, George S. (*See* Croggon, Henry, assignor.)					
	Prindle, John. (*See* Baltz & Prindle.)					
	Prindle, John A. (*See* Worswick & Prindle.)					
195,646	Prindle, Osbert S., assignor of one-half interest to H. C. Hodgkins, Carthage, N. Y. Milk-cooler	Sept. 25, 1877	912	271	12	554
	Prindle, R. B. (*See* Little, Benjamin F., assignor.)					
	Prindle, Stephen W. (*See* Baltz & Prindle.)					
187,775	Prior, Samuel, Trenton, N. J. Shoe-tip	Feb. 27, 1877	875	272	11	347
195,398	Same.....Tip for boots and shoes	Sept. 18, 1877	663	196	12	510
192,877	Proctor, George K., Salem, Mass. Sewing-machine caster	July 10, 1877	347	102	12	67
186,017	Proctor, George M., Gorham, Me. Attaching braces to sleigh-knees	Jan. 9, 1877	209	63	11	45
	Proctor, Joseph B. (*See* Thompson, George, assignor.)					
	Proctor, Josiah K. (*See* Knowles, Proctor & Pendleton.)					
	Producers' Torpedo Company. (*See* Hinman & Seely, assignors.)					
	Same.....(*See* Swett, Edward E., assignor.)					
189,259	Proeger, Julius, Pittsburg, Pa. Injector	Apr. 3, 1877	226	76	11	589
	Prouty, Joel H., *et al.* (*See* Burns, William H., assignor.)					
190,158	Provenzano, Joseph N., and S. De Gaetano, New York, N. Y. Chair-seat	May 1, 1877	48	13	11	753
195,951	Same.....Material for chair-seats	Oct. 9, 1877	274	77	12	607
	Providence Tool Company. (*See* Brown, Daniel W., assignor.)					
	Prudden, Mary F., *et al.* (*See* Godley, George F., assignor) (Reissue.)					
	Pruitt, Sanford C. (*See* Ludlow & Pruitt.)					
194,464	Pruner, David I., assignor to self, A. S. and G. Valentine, and G. A. Fairlamb, McVeytown, Pa. Machine for making horseshoe-nails	Aug. 21, 1877	708	211, 212	12	343
187,047	Prüsmann, Carl H., assignor to B. Schäffer and C. Budenberg, Buckau, near Madgeburg, Prussia. Spark-extinguisher	Feb. 6, 1877	127	41	11	219
197,171	Pryibil, Paul, New York, N. Y. Shaft-hanger	Nov. 13, 1877	460	135	12	834
191,714	Pryor, Edward F., assignor of one-half interest to W. H. Naumann Dayton, Ohio. Drill-hole	June 5, 1877	190	60	11	1002
189,653	Pudigon, August, Charleston, S. C. Reflector and plant-protector	Apr. 17, 1877	657	203	11	660
189,137	Puffer, Alvin D., Boston, Mass. Apparatus for cooling liquids	Apr. 3, 1877	107	39	11	574
	Puffer, William, *et al.* (*See* Pierson, Charles H., assignor.)					
187,557	Pugh, James C., Ambia, Ind. Car-coupling	Feb. 20, 1877	644	200	11	308
196,931	Pugh, William G., Baltimore, Md. Gas-burner	Nov. 6, 1877	204	59	12	788
188,817	Pulaski, William C., Chicago, Ill. Fire-escape	Mar. 27, 1877	881	268	11	523
189,260	Pullan, Edwin, Detroit, Mich. Combined towel-rack and wall-protector	Apr. 3, 1877	228	76	11	589
	Pullian, H., *et al.* (*See* Starkey, William, assignor.)					
188,186	Pullinger, George B., Philadelphia, Pa. Folding-seat	Mar. 6, 1877	222	70	11	409
	Pulver, Peter. (*See* Schindler & Gerdom, assignors) (Reissue.)					
	Pulverizing Manufacturing Company. (*See* Lipsey, Andrew B., assignor.)					
186,044	Pumpelly, James K., and E. Collins, Fond du Lac, Wis. Horse-collar	Jan. 9, 1877	237	71	11	48
194,370	Pumphrey, Robert B., Baltimore, Md. Meat-cutter	Aug. 21, 1877	611	183	12	329
191,715	Purcel, George W., Zanesville, Ohio. Fire-front	June 5, 1877	191	60	11	1002
	Purcell, George W. (*See* Beard & Purcell.)					
192,453	Purdy, Hiram, Burlington, Iowa. Fruit-jar	June 26, 1877	787	297	11	1135
194,617	Same.....same	Aug. 28, 1877	858	255	12	373
	Pursell, Leffard H. (*See* Ballard, Pursell & Little.)					
	Pursell, William M. (*See* Clark & Pursell.)					
193,281	Purviance, Thomas, assignor of one-half interest to D. Lowmiller, Steubenville, Ohio. Dumping-car	July 17, 1877	753	231	12	136
	Pusey, J. L., *et al.* (*See* Savery, Thomas H., assignor.)					
197,661	Putnam, Abel, jr., Saratoga Springs, N. Y. Wire fence	Nov. 27, 1877	985	294	12	928
198,680	Putnam, George W., Glens Falls, N. Y. Car-coupling	Dec. 25, 1877	1001	304	12	1115
	Putnam, Henry W. (*See* Hornfager, William, assignor.)					
	Same.....(*See* Sedgwick, Charles, assignor.)					
	Same.....(*See* Morgenstern, William, assignor) (Reissue.)					
	Same.....(*See* Robinson, Daniel T., assignor) (Reissue.)					

Alphabetical list of patentees for the year 1877—Continued

No.	Name, residence, and invention.	Date	Monthly volume.		Official Gazette.	
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187,172	Putnam, Henry W., Bennington, Vt. Barbed fence-wire	Feb. 6, 1877	239	78	11	225
187,776	Same.....Fence-wire-barbing machine	Feb. 27, 1877	876	273	11	347
188,754	Putnam, John, Rushville, Ill. Corn-dropper	Mar. 27, 1877	804	246	11	513
190,447	Putnam, John, Fitchburg, Mass. Scale-measure	May 8, 1877	350	102	11	800
191,716	Putnam, Salmon W., Fitchburg, Mass. Engine-frame	June 5, 1877	192	60	11	1002
192,129	Same.....Metal-working lathe	June 19, 1877	632	193, 194	11	1077
187,904	Putnam, Samuel, Emigrant Gap, Cal. Machine for resawing lumber	Feb. 27, 1877	1004	310	11	364
194,618	Putnam, Silas S., assignor to W. W. Whitmarsh, Boston, Mass. Substitute for coffee	Aug. 28, 1877	858		12	373
196,932	Putnam, Silas S., Boston, Mass. Machine for finishing horseshoe-nails	Nov. 6, 1877	205	59, 60	12	788
195,166	Pyke, James, assignor to M. W. Field and O. H. Crawford, Detroit, Mich. Jack for shoemakers	Sept. 11, 1877	427	126	12	468
189,386	Pyle, Isaac N., Decatur, Ind. Wheel-tire	Apr. 10, 1877	377	122	11	616
7,611	Pyott, Louis T., assignor, by mesne assignments, to M. Pennypacker, Philadelphia, Pa. Screw hoisting-pulley apparatus (Reissue)	Apr. 17, 1877	841	259	11	684
188,672	Pyott, Louis T., Philadelphia, Pa. Running-gear for cars	Mar. 20, 1877	714	219	11	492
195,647	Pyott, Louis T., assignor to J. G. Brill & Co., Philadelphia, Pa. Car-brake	Sept. 25, 1877	913	272	12	554
194,049	Quackenbush, George, Bath, N. Y. Buckle for harness	Aug. 14, 1877	270	80	12	278
188,028	Quackenbush, Henry M., Herkimer, N. Y. Spring air-gun	Mar. 6, 1877	71	20	11	390
195,689	Same.....Toy building-block	Sept. 25, 1877	952	285	12	559
188,540	Quackenbush, Jay L., Portland, Oreg. Convicts' shackle	Mar. 20, 1877	588	182	11	475
189,963	Quarry, William J., Cincinnati, Ohio. Mounting show-cards, maps, &c	Apr. 24, 1877	932	284	11	704
195,399	Quayle, William, assignor of one-half interest to Culter, Sandmeyer & Co., Peoria, Ill. Chimney-top	Sept. 18, 1877	664	197	12	510
186,060	Quesnel, Joseph A., Arthabaskaville, Quebec, Canada. Lock for prison-doors	Jan. 9, 1877	251	76	11	50
196,766	Quentin, Adolph, Milwaukee, Wis. Floating-soap	Nov. 6, 1877	28	8	12	765
	Quigley, George. (*See* Arnold & Quigley.)					
	Quimby, Edward E. (*See* Weston & Quimby.)					
186,754	Quimby, Edward E., Orange, N. J., assignor to American Screw Company, Providence, R. I. Machine for making wood-screws	Jan. 30, 1877	947	294, 295	11	171
186,755	Same.....Magnetic holder for feeding screw and other blanks	Jan. 30, 1877	951	296	11	171
188,029	Quimby, Edward E., Orange, assignor to F. O. Matthiessen & Wiechers Sugar Refining Company, Jersey City, N. J. Bone-black retort	Mar. 6, 1877	72	20	11	390
195,690	Quimby, Enoch R., Lynn, Mass. Magazine fire-arm	Sept. 25, 1877	953	285	12	559
	Quimlan, William J., *et al.* (*See* Fairies, Robert, assignor.)					
185,963	Quin, Edward C., Philadelphia, Pa. Inkstand	Jan. 2, 1877	152	46	11	28
189,138	Quin, Michael, Galveston, Tex. Machine for tightening iron bands on bales	Apr. 3, 1877	108	39	11	574
7,960	Quinby, Eben C., and J. C. Whiting, assignors of one-half interest to W. W. Ater and J. J. Sylvester, Saint Louis, Mo. Enameling ironware (Reissue)	Oct. 2, 1877	186		12	588
193,422	Quinby, Eben C., and J. C. Whiting, Saint Louis, Mo. Enameling ironware	July 24, 1877	908		12	159
197,663	Quinby, Levi C., Monticello, Iowa. Feather-renovator	Nov. 27, 1877	936	294	12	928
186,617	Quinn, Frank E., Erie, Pa. Drill-jar	Jan. 23, 1877	819	253	11	143
	Quinn, James F. (*See* Barrett & Quinn.)					
197,662	Quinn, John H., Boston, Mass. Water-closet valve	Nov. 27, 1877	986	294	12	928
	Quinn, Martin. (*See* Condry & Quinn.)					
187,312	Quinn, Russel C., Texas Valley, N. Y. Cider-press	Feb. 13, 1877	396	126	11	268
	Quirk, John B. (*See* Davis, Augustus B., assignor.)					
190,366	Quirk, John B., assignor of one-half interest to A. B. Davis, Philadelphia, Pa. Car-spring	May 1, 1877	245	73	11	778
7,622	Quirolo, Antonio, assignor, by mesne assignments, to J. Ardito, New York, N. Y. Stereoscope (Reissue)	Apr. 24, 1877	1155	351	11	733
188,408	Quirk, William, assignor to T. B. Hagstoz and C. N. Thorpe, Philadelphia, Pa. Parallel pliers	Mar. 13, 1877	452	140	11	448
198,681	Raabe, Claus, Clifton, N. Y. Head section for couches	Dec. 25, 1877	1002	305	12	1115
192,188	Raby, Richard, jr., Loudonville, Ohio. Clothes-line holder	June 19, 1877	691	212	11	1024
192,934	Racer, Martin J., La Grange, Tex. Vehicle-wheel	July 10, 1877	394	117	12	74
	Rackliff, William, *et al.* (*See* Lamb, James C., assignor.)					
188,944	Radcliffe, Charles, assignor to New Jersey Manufacturing Company, Newark, N. J. Machinery for manufacturing buttons	Mar. 27, 1877	997	306, 307	11	539
190,159	Radcliffe, Squires, Little Falls, N. J. Non-conducting felt	May 1, 1877	49		11	753
186,163	Radde, Carl H. O., Hamburg, Germany. Composition-pattern for taking multiple impressions	Jan. 9, 1877	344		11	63
187,728	Same.....same	Feb. 27, 1877	828		11	341
187,729	Same.....Mold for solid-color printing-blocks	Feb. 27, 1877	829	258	11	341
187,730	Same.....Printing-press	Feb. 27, 1877	829	258	11	341
189,654	Same.....Machine for shaping solid colors for printing	Apr. 17, 1877	658	204	11	660
193,178	Raddin, John, Lynn, Mass. Train-brake for railway-cars	July 17, 1877	638	193, 194	12	115
	Radebaugh, Randolph F., *et al.* (*See* Howig, Frank A., assignor.)					
	Radikin, James. (*See* Briggs, Greene & Radikin.)					
198,682	Raeke, Hermann T., Baltimore Md. Curtain-fixture	Dec. 25, 1877	1003	305	12	1115
192,527	Raetz, Christopher, San Francisco, Cal. Machine for cutting sugar-cubes	June 26, 1877	1063	320	11	1144
191,175	Raffel, Sarah R., Hartford, Conn. Traveling-bag	May 22, 1877	1094	327	11	913
188,409	Rager, Christian B., North Manchester, Ind. Weather-strip	Mar. 13, 1877	453	141	11	448
187,671	Rahte, Frank, Fond du Lac, Wis. Eave-trough hanger	Feb. 20, 1877	753	233	11	322
188,481	Railsback, Lafayette D. Indianapolis, Ind. Pump	Mar. 20, 1877	536	165	11	467
	Railway Register Manufacturing Company. (*See* Corbett, Joseph, assignor.)					
	Raine, E., jr., *et al.* (*See* Warner, John P., assignor.)					
186,618	Rakes, Frank, assignor to self and W. Bryson, Greenup, Ky. Wagon-lock	Jan. 23, 1877	820	253	11	144
194,174	Rakes, John F., assignor to self and W. Bryson, Greenup, Ky. Fan attachment for rocking-chairs	Aug. 14, 1877	410	123	12	295
189,139	Ralfs, Peter W., Milwaukee, Wis. Window-mirror	Apr. 3, 1877	109	39	11	574
198,154	Ralph, Frank, assignor to T. G. Conway, New York, N. Y. Breech-loading fire-arm	Dec. 11, 1877	450	141	12	1020
197,495	Ralston, John B., Rockford, Ill. Universal joint	Nov. 27, 1877	816	243	12	904
	Rambo, Elizabeth C. (*See* Rossiter, Lindsey, assignor.)					
185,869	Ramey, Ambrose B. La Belle, Mo. Device for watering stock	Jan. 2, 1877	53	17	11	15
186,164	Ramsdell, Daniel P., New Haven, Conn., assignor of one-half interest to C. B. Payne, Brooklyn, N. Y. Wooden-shoe machine	Jan. 9, 1877	345	105	11	63
198,415	Ramsey, Joseph, jr., Antestown, Pa. Car-coupling	Dec. 18, 1877	733	221	12	1067
190,367	Ramsey, William, Dayton, Ohio. Device for feeding steam to furnaces	May 1, 1877	126	73	11	778
186,756	Ramseyer, George A., New York, N. Y. Piano-stool	Jan. 30, 1877	952	296	11	171
186,757	Same.....same	Jan. 30, 1877	953	296	11	172
196,767	Rand, Addison C., New York, N. Y. Blasting-cartridge	Nov. 6, 1877	28	9	12	765

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187,415	Rand, Alonzo C., Minneapolis, Minn. Apparatus for carbureting air	Feb. 13, 1877	496	154	11	281
196,700	Same.....Stove and furnace	Oct. 30, 1877	1064	309	12	746
	Rand, Edward L. (*See* Kelly & Rand.)					
190,900	Rand, Jackson, Red Banks, Miss. Corn-planter	May 15, 1877	809	239	11	867
	Rand, McNally & Co. (*See* Lyon, Joseph W., assignor.)					
	Same.....(*See* McNally, Andrew, assignor.)					
191,176	Randall, Charles A., Brooklyn, N. Y. Chemical telegraph	May 22, 1877	1005	327	11	914
193,672	Randall, Charles A., New York, N. Y. Perforating apparatus for electric telegraphs	July 31, 1877	1181	353	12	206
190,077	Randall, Edward H., Poultney, Vt. Chronometric governor for various purposes	Apr. 24, 1877	1117	339	11	728
190,515	Randall, Francis W., Burlington, Mich. Grain-binder	May 8, 1877	419	122	11	809
197,172	Randall, Frank C., Joliet, Ill. Barbed fence	Nov. 13, 1877	460	136	12	835
	Randall, George H. (*See* Randall, Robert H. and G. H.)					
	Randall, Henry R. (*See* Boomer & Randall.)					
7,688	Randall, Henry R., Brooklyn, N. Y. Manufacturing malt extract.....(Reissue)	May 15, 1877	876		11	876
187,313	Same.....same	Feb. 13, 1877	398		11	268
190,899	Same.....Apparatus for separating malt extract from the husks of refuse brewer's mash	May 15, 1877	808	239	11	867
194,930	Randall, Isaac H., Boston, Mass. Street-car window	Sept. 4, 1877	174	54	12	424
194,950	Same.....Car wheel and axle	Sept. 4, 1877	194	59	12	427
192,388	Randall, James H., assignor of one-half interest to H. Phillips, Providence, R. I. Package holder or carrier	June 26, 1877	931	279	11	1127
	Randall, Reuben W. (*See* Graham, Edmund H., assignor.)					
198,250	Randall, Robert H. and G. H., Natick, Mass. Sash-fastener	Dec. 18, 1877	583	176	12	1045
	Randall, Rodolphus O. (*See* Pope, Wilie D., assignor.)					
	Randall, Rodolphus O. (*See* Wescott & Randall.)					
192,528	Randall, Silas B., Cincinnati, Ohio. Machinery for shaping and creasing leather straps	June 26, 1877	1064	321	11	1144
186,619	Randall, William, Salem, Mass. Injector	Jan. 23, 1877	820	254	11	144
192,608	Randell, William, assignor of one-half interest to J. W. Cipperley, J. C. Cole, and T. E. Haslehurst, Troy, N. Y. Button-hole attachment for sewing-machines	June 12, 1877	489	150	11	1046
	Randell, Harvey E. (*See* Fontayne, Albert, assignor.)					
196,387	Randol, Mastin C., Huntington, Tenn. Corn-planter	Oct. 23, 1877	745	214	12	690
194,975	Randolph, James L., Martinsburg, W. Va. Bale-tie	Sept. 11, 1877	227	70	12	439
196,595	Randolph, John M., Somerset, Ohio. Evaporator	Oct. 30, 1877	965	280	12	732
7,787	Rankin, Charles S., Cincinnati, Ohio. Fire-place	(Reissue) July 10, 1877	524	158	12	91
	Rankin, George R. (*See* Mann & Rankin.)					
186,165	Rankin, Hugh P., Allegheny, Pa. Meat-chopper	Jan. 9, 1877	346	106	11	63
	Rankin, Ira P., *et al.* (*See* Buckminster, Prescott S., assignor.)					
193,995	Rankin, John R., Indianapolis, Ind. Rotary printing-press	Aug. 7, 1877	195	59	12	261
196,559	Rankin, Robert G., assignor of one-half interest to J. S. Green, Waverly, Ind. Car-coupling	Oct. 30, 1877	911	264	12	724
188,945	Rankin, Thomas L., Lyndon, Kans., assignor to North American Ice Company, Dallas, Tex. Ice-machine	Mar. 27, 1877	1000	307	11	540
189,140	Rankin, William, St. Margaret's Bay, Nova Scotia. Piston-packing for steam-engines	Apr. 3, 1877	110	39, 40	11	574
	Ransom & Co., S. H. (*See* Hamlin, Charles A., assignor.)					
197,290	Ransom, David L., Buffalo, N. Y. Desk	Nov. 20, 1877	593	175, 176	12	862
194,723	Ransom, Ezra, Flint, Mich. Boiler-cleaner	Aug. 28, 1877	956	284	12	386
	Ransom, George F. (*See* Hutchinson & Ransom.)					
187,314	Ransom, Louis, Stratford, N. Y. Steam street-car	Feb. 13, 1877	399	126	11	268
186,018	Ransom, Newman A., assignor of one-half interest to A. N. Beard, Chicago, Ill. Attaching knobs to doors	Jan. 9, 1877	210	63	11	45
189,261	Ransom, Newman A., Chicago, Ill. Combined register and punch	Apr. 3, 1877	228	76	11	589
186,019	Rants, Abraham, Fort Recovery, Ohio. Millstone adjustment	Jan. 9, 1877	211	64	11	45
	Rapp, Christian F. (*See* Van Kannel & Rapp.)					
186,621	Rapp, Christian F., Cincinnati, Ohio. Slate	Jan. 23, 1877	822	254	11	144
190,249	Rasch, Jonas, Christiana, Norway. Lamp-burner	May 1, 1877	131	39	11	763
	Rasin, William J. (*See* Wyckoff, George D., assignor.)					
	Rastetter, Louis. (*See* Cookson & Rastetter.)					
	Same.....(*See* Orff, Cookson & Rastetter.)					
186,622	Ratcliff, Frederick, West Meriden, Conn. Calendar	Jan. 23, 1877	823	254	11	144
193,996	Ratcliff, Frederick, Meriden, Conn. Call-bell	Aug. 7, 1877	196	59	12	261
188,410	Rath, Paul, New York, N. Y. Chair seat and back	Mar. 13, 1877	453	141	11	448
196,824	Rath, Paul, Jersey City Heights, N. J. Chair seat and back	Nov. 6, 1877	85	26	12	773
	Rathbun, Charles B. (*See* Hull, Nicholas A., assignor.)					
187,558	Rathbun, George M., Sedan, Kans. Work-bench	Feb. 20, 1877	645	201	11	308
194,533	Rathbun, Lewis V., East Pembroke, N. Y. Bolting-reel	Aug. 28, 1877	785	233	12	362
194,974	Rathknecht, Mathias and V., Chicago, Ill. Table-leaf support	Sept. 11, 1877	227	70	12	439
	Rathknecht, Victor. (*See* Rathknecht, Mathias and V.)					
192,009	Rau, Frederick, Albia, Iowa. Gate	June 12, 1877	491	159	11	1046
186,620	Rau, Julius, Stuttgart, Germany. Dyeing silk	Jan. 23, 1877	821		11	144
195,048	Rauch, John H., Ida, Mich. Ditching-machine	Sept. 11, 1877	306	93	11	449
	Rausch, William. (*See* Hammer, George, assignor.)					
188,482	Rawbone, William G., Toronto, Canada. Combined tool for fire-arms	Mar. 20, 1877	536	165	11	467
197,291	Same.....Implement for extracting cartridge-shells	Nov. 20, 1877	594	176	12	862
186,691	Rawlings, Thomas H., Ingersoll, Ontario, Canada. Propelling vessels	Jan. 30, 1877	894	276	11	163
	Ray, Charles A. (*See* Cammack & Ray.)					
186,623	Ray, Samuel, assignor to self and W. A. Nixon, Alliance, Ohio, and Prindle & Co., Washington, D. C. Railway-rail joint	Jan. 23, 1877	824	254	11	144
194,371	Raymond, Francis, Wheeling, W. Va. Sad-iron stand and scourer	Aug. 21, 1877	612	184	12	330
186,876	Raymond, Frank, assignor of one-half interest to M. J. Calnan, Greenville, S. C. Composition alloy	Jan. 30, 1877	1080	334	11	187
190,618	Raymond, James P., Cincinnati, Ohio. Paper-bag machine	May 8, 1877	519	154, 155	11	823
190,619	Same.....same	May 8, 1877	523	155	11	823
	Raymond, Joseph. (*See* Eldridge, George W., assignor.)					
197,664	Raymond, Seymour, assignor to self and J. Campbell, Middletown, Pa. Heating-stove	Nov. 27, 1877	987	295	12	929
	Raynor, William. (*See* Hull & Raynor.)					
193,130	Read, Calvin D., Ayer, Mass. Corn-shelling machine	July 17, 1877	599	181	12	109
192,744	Read, Daniel M., New York, N. Y. Pocket-book	July 3, 1877	160	46	12	35
198,043	Same.....Fastening for pocket-books	Dec. 11, 1877	338	105	12	1004
193,347	Read, George F., New England Village, Mass. Machinery for polishing and setting the sole-edges of boots and shoes	July 24, 1877	836	256	12	149
	Read, George W. (*See* Pfeffer, Philipp, assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
196,479	Read, Henry A., Fort Wayne, Ind. Horseshoe	Oct. 23, 1877	832	240	12	702
189,956	Read, James A., Decatur, Ill. Coin-drawer	Apr. 24, 1877	977	299	11	711
193,777	Read, James F., Portland, Mich. Gate	July 31, 1877	1276	384	12	220
196,701	Read, J. Waterman, and H. L. Howell, Mohawk, assignor to self and J. Chattaway, Ilion, N. Y. Bed-bottom	Oct. 30, 1877	1066	310	12	746
192,454	Read, Luther, Henderson, N. Y. Millstone-balancing device	June 26, 1877	787	297	11	1135
197,405	Read, Waterman J., assignor of part interest to B. A. Stone and H. D. Alexander, Mohawk, N. Y. Bed-spring	Nov. 20, 1877	710	212	12	880
193,724	Reagan, Ahimaas, Salisbury, Mo. Grain-fork	July 31, 1877	1224	367	12	213
193,778	Same.....Harrow	July 31, 1877	1277	384	12	220
194,465	Real, John, Double Springs, Miss. Planter and manure-distributer	Aug. 21, 1877	712	212	12	343
	Reams, Sherwood Y. (*See* Share & Reams.)					
190,970	Reaser, Warren T., Waupun, Wis. Water-wheel	May 22, 1877	899	266, 267	11	887
189,904	Rebasz, Lyman A., assignor to F. C. Lillis and N. E. Badgle, Lockport, N. Y. Faucet	Apr. 24, 1877	933	284	11	704
197,945	Reble, Gustav F. W., Moscow, Russia. Railway and locomotive	Dec. 11, 1877	244	75, 76	12	990
	Reboul, Joseph. (*See* Despeix & Reboul.)					
196,101	Recher, Henry, Liberty, Ohio. Farm-gate	Oct. 16, 1877	439	128	12	639
193,179	Reck, Gustavus H., Bethlehem, Pa. Shade-holder	July 17, 1877	639	194	12	115
	Reckendorfer, Joseph. (*See* Benson, Henry C., assignor.)					
	Same.....(*See* Lipman, Hymen L., assignor).....(Reissue.)					
	Same.....(*See* Walpuski, Charles, a signor).....(Reissue.)					
7,993	Reckendorfer, Joseph, New York, N. Y. Pencil.....(Reissue)	Dec. 11, 1877	489	152	12	1024
	Record, John F. (*See* Hattou & Record.)					
7,735	Redden, Henry, assignor to A. M. Underhill, New York, N. Y. Bag-fastener.(Reissue)	June 12, 1877	540	165	11	1052
188,673	Same.....same	Mar. 20, 1877	716	219	11	492
189,262	Redding, Harvey, assignor of one-half interest to J. Redding, Boston, Mass. Insulated wire	Apr. 3, 1877	230	77	11	589
	Redding, Jerome. (*See* Redding, Harvey, assignor.)					
	Redding, William F. (*See* Roache & Redding.)					
	Redfield, J. B., *et al.* (*See* Milne, Robert D., assignor.)					
188,755	Redfield, Paul S., Providence, R. I. Fishing float and sinker attachment	Mar. 27, 1877	806	246	11	513
197,797	Redfield, Stephen M., Maryville, Mo. Tenoning-machine	Dec. 4, 1877	93	28	12	959
189,785	Redier, Joseph A. J., Paris, France. Watchman's time-detector	Apr. 17, 1877	792	243	11	677
	Redlich, Abraham, *et al.* (*See* Pollak, Joseph, assignor.)					
193,550	Redman, Anton, Milwaukee, Wis. Beer-preserver	July 24, 1877	1033	310	12	176
197,665	Redman, Joseph, South Carrollton, Ky. Plow attachment	Nov. 27, 1877	988	295	12	929
194,784	Redmond, Charles C., Santa Clara County, assignor of one-half interest to J. Hart and F. H. Nicholson, San José, Cal. Cover for liquid-measures	Sept. 4, 1877	31	10	12	404
7,494	Redmond, Owen, Rochester, N. Y., assignor, by mesne assignments, to H. H. Doubleday, Washington, D. C. Packing for oil-wells.....(Reissue)	Feb. 6, 1877	285	93	11	240, 241
7,495	Same.....same.....(Reissue)	Feb. 6, 1877	287	94	11	241
197,054	Redmond, Richard J., Oxford, N. Y. Fence-post	Nov. 13, 1877	338	100	12	816
	Redway & Burton. (*See* Redway, Albert J., assignor.)					
192,280	Redway, Albert J., assignor to Redway & Burton, Cincinnati, Ohio. Reservoir for stoves and ranges	June 19, 1877	793	241	11	1008
191,883	Redwood, Thomas B., Fairlawn, Finchley, England. Manufacture of gas	June 12, 1877	362		11	1029
194,724	Reed, Albert C., R. S., and R. L. Greenlee, Chicago, Ill. Fence	Aug. 28, 1877	957	284	12	386
186,624	Reed, Asdrubal, assignor of one-half interest to W. G. Grabendike, Ottawa, Kans. Animal-trap	Jan. 23, 1877	825	255	11	144
186,497	Reed, Charles D., Polo, Ill. Corn-harvester	Jan. 23, 1877	701	215, 216	11	127, 128
196,933	Reed, Daniel W., Allenton, Ala. Cotton-planter	Nov. 6, 1877	207	60	12	788
186,917	Reed, Emma, Scranton, Pa. Corset	Jan. 30, 1877	1116	116	11	192
	Reed, George. (*See* Chapman, Charles H., assignor.)					
7,664	Reed, George (R. Hochkofler, guardian), W. C. Hoagland, and J. J. Newsom, Brooklyn, Cal.; said Hoagland & Newsom assignors to R. Holland. Window-screen (Reissue)	May 8, 1877	574	170	11	829
192,389	Reed, John A., Dunellen, N. J., assignor to Reed's Sectional Safety Boiler Company, New York, N. Y. Sectional steam-generator	June 26, 1877	932	279	11	1127
197,796	Reed, John J., Lyons, Iowa. Windmill	Dec. 4, 1877	92	28	12	959
	Reed, John V. (*See* Stowe, Benjamin L., assignor.)					
196,596	Reed, Lemon M., assignor of one-half interest to J. A. Beidler, Cleveland, Ohio. Fire-kindler	Oct. 30, 1877	966	280	12	732
192,935	Reed, Levi T., Erieville, N. Y. Milk-cooler	July 10, 1877	395	118	12	75
7,932	Reed, Louis, New York, N. Y. Barrel-hoop.....(Reissue)	Oct. 30, 1877	1106	322	12	752
188,412	Same.....Making wooden hoops	Mar. 13, 1877	455	141	11	418
188,483	Same.....Head-lining for barrels	Mar. 20, 1877	537	165	11	468
196,310	Same.....Bundling barrel-head linings	Oct. 23, 1877	669	193	12	679
188,411	Reed, Robert A., Hoboken, N. J. Dumping-wagon	Mar. 13, 1877	454	141	11	448
188,541	Same.....same	Mar. 20, 1877	588	182	11	475
7,589	Reed, Samuel G., Wellesley, Mass. Tire-heating apparatus.....(Reissue)	Apr. 3, 1877	278	90	11	594
197,564	Reed, Samuel H., assignor to self and W. Gniffy, Greensburg, Pa. Roof	Nov. 27, 1877	888	264	12	914
196,480	Reed, Thomas S., assignor to self and W. Fuller, Calais, Vt. Leather-rounding machine	Oct. 23, 1877	832	240	12	702
193,725	Reed, William, Geneva, Ind. Barbers' shears	July 31, 1877	1224	367	12	213
198,155	Reed, William G., Boston, Mass. Folding-crib	Dec. 11, 1877	451	141	12	1020
193,460	Reed, William S., Leominster, Mass. Toy locomotive	July 24, 1877	943	286	12	164
	Reed's Sectional Safety Boiler Company. (*See* Reed, John A., assignor.)					
191,717	Reedy, Henry J., Cincinnati, Ohio. Hoisting-machine	June 5, 1877	192	61	11	1003
192,130	Reekie, James, Martling, Mo. Lamp for heating a tailor's goose	June 19, 1877	634	194	11	1077
7,526	Reel, Joseph P., and A. J. Seyler, Cedarville, Ill. Middlings-separator.....(Reissue)	Feb. 20, 1877	789	244	11	327
	Rees, James. (*See* Shook, Levi, assignor.)					
	Rees, James, *et al.* (*See* Crichton, Robert and G. N., assignors.)					
190,620	Reese, Abram, Pittsburg, Pa. Machine for rolling articles of metal	May 8, 1877	521	156	11	823
192,627	Reese, Adam R., Phillipsburg, N. J. Mower	July 3, 1877	73	21	12	22
198,531	Reese, Edwin, Baltimore, Md. Nut-lock	Dec. 25, 1877	849	258	12	1093
7,680	Reese, Jacob, Pittsburg, Pa. Machine for slitting railway-rails.....(Reissue)	May 15, 1877	865	256	11	875
190,448	Same.....Bessemer steel ingot	May 8, 1877	351		11	800
190,983	Same.....Machine for rolling and straightening cylindrical bars or tubes	May 22, 1877	916	271	11	889
193,551	Same.....Manufacture of iron and steel	July 24, 1877	1034		12	176
	Reesing, Herman. (*See* Sellman, Reesing & Wolff).....(Reissue.)					
	Reeves, Alfred B. (*See* Reeves, William F., A. B., and M. T.)					
	Reeves, David, *et al.* (*See* Bonzano, Adolphus, assignor.)					
195,308	Reeves, Edward H., West Farmington, Me. Pattern-chart for cutting garments	Sept. 18, 1877	552	170	12	497

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
197,666	Reeves, James E., Saint Joseph Mo. Joint for carriage-tops	Nov. 27, 1877	989	295	12	920
	Reeves, Marshal T. (*See* Reeves, William F., A. B., and M. T.)					
192,790	Reeves, Samuel H., Brooklyn, N. Y. Bed-bottom	July 3, 1877	234	68	12	44
187,983	Reeves, William F., A. B., and M. T., Columbus, Ind. Tongueless plow	Mar. 6, 1877	27	7	11	384
	Reeves, William H., *et al.* (*See* Bonzano, Adolphus, assignor.)					
194,263	Regan, Simon, Bow, England, assignor of one-half interest to T. Gemmell, Baltimore, Md. Fire-grate for steam-boilers	Aug. 14, 1877	490	149	12	307
188,946	Regan, William, Branford, Conn., assignor to T. Kennedy, New York, N. Y. Attaching knobs to spindles	Mar. 27, 1877	1002	307	11	540
189,496	Reich, John, Buffalo, N. Y. Plow	Apr. 10, 1877	484	153	11	629, 630
198,044	Reichard, Edwin D., Reading, Pa. Burglar-alarm	Dec. 11, 1877	339	105	12	1004
196,768	Reichert, Johann, New York, N. Y. Curtain-fixture	Nov. 6, 1877	29	9	12	765
195,453	Reichle, Ferdinand, Detroit, Mich. Vehicle-seat	Sept. 25, 1877	732	216	12	527
187,173	Reichmann, Lazarus, New York, N. Y. Doll-head	Feb. 6, 1877	240	78	11	235
	Reid, Aquila J. (*See* Corning & Reid.)					
	Same (*See* Corning, Cyrus, assignor.)					
194,264	Reid, Eva B., New York, N. Y. Restoring crape, laces, &c.	Aug. 14, 1877	492		12	307
	Reid, John M. (*See* Hunter, Frederick G., assignor.)					
	Reid, John W. (*See* Fickett, Franklin H., assignor.)					
190,250	Reid, Joseph and R., Philadelphia, Pa. Grain-crusher	May 1, 1877	132	39	11	764
	Reid, Robert. (*See* Reid, Joseph and R.)					
194,880	Reiff, William H., assignor of one-half interest to E. V. Machette, Philadelphia, Pa. Burglar-alarm	Sept. 4, 1877	122	38	12	417
197,895	Reiff, William H., Philadelphia, Pa. Burglar-alarm	Dec. 4, 1877	188	57	12	973
	Reigart, James H. (*See* Haskin & Reigart.)					
186,166	Reiher, Frank A., assignor of one-half interest to C. F. Bollmann, Chicago, Ill. Transom lifter	Jan. 9, 1877	348	106	11	63
188,947	Reiher, Frank A., assignor to C. T. Bollmann, Chicago, Ill. Transom-lifter	Mar. 27, 1877	1003	308	11	540
197,976	Reiling, Charles J., Pittsburg, Pa. Metallic fence	Dec. 11, 1877	278	85	12	994
	Reily, George B. (*See* Smith & Reily.)					
190,901	Reimers, Christian A., and J. C. Branch, Davenport, Iowa. Stove-mat	May 15, 1877	810	249	11	867
197,406	Reinecke, Henry F., Jersey City Heights, N. J. Pot for plants	Nov. 20, 1877	711	212	12	880
186,758	Reineke, Henry, Allegheny, Pa. Coupling and joint for lead pipes	Jan. 30, 1877	954	296	11	172
189,263	Reinhard, Robert, Langendreer, Prussia, assignor to W. H. Reinhard, Huntington, Ind. Device for throwing belts on pulleys	Apr. 3, 1877	231	77	11	589
197,173	Reinhard, William, Eau Claire, Wis. Sad-iron holder	Nov. 13, 1877	451	136	12	835
	Reinhard, William H. (*See* Reinhard, Robert, assignor.)					
194,372	Reinhart, John J., and W. Houghton, Loogootee, Ind. Sawing-machine	Aug. 21, 1877	613	184	12	330
189,497	Reinig, John, Fond du Lac, Wis. Tea-kettle	Apr. 10, 1877	485	153	11	630
	Reistle, Charles. (*See* Hinrichs & Reistle.)					
188,542	Reistle, Charles, assignor to C. F. A. Hinrichs, Brooklyn, N. Y. Lamp	Mar. 20, 1877	589	182	11	475
187,731	Reitz, William, and E. Eicholzer, Joliet, Ill. Vegetable-cutter	Feb. 27, 1877	831	259	11	341
189,058	Remillard, Edouard, Oakland, Cal. Brick-yard truck	Apr. 3, 1877	45	16	11	565
	Remington & Sons, E. (*See* Smoot & Hamilton, assignors.)					
192,189	Remington, De La Fayette, Silverton, Oreg. Vehicle-wheel	June 19, 1877	692	212	11	1085
	Remington, George H. (*See* Manton & Remington) (Reissue.)					
190,902	Remsen, Garnet W., Brooklyn, N. Y. Conveyance of liquids	May 15, 1877	811	240	11	868
194,619	Renfro, Roberson A., Rockwall, Tex. Sulky-plow	Aug. 28, 1877	859	256	12	373
188,819	Renner, S. Jennie, Petersburg, Pa. Apple corer and quarterer	Mar. 27, 1877	883	268	11	523
7,866	Rennie, Sarah M., assignor of one-half interest to W. J. Rennie, Binghamton, N. Y. Dust-pan (Reissue)	Aug. 28, 1877	1009	300	12	392
191,368	Same same	May 29, 1877	1285	388	11	948
	Rennie, William J. (*See* Rennie, Sarah M., assignor.)					
188,187	Reno, Samuel J., Allegheny, Pa. Sucker-rod coupling	Mar. 6, 1877	223	70	11	409
196,825	Renshaw, David, Cohasset, and G. B. N. Tower, Cambridge, Mass. Steam-generator	Nov. 6, 1877	85	26, 27	12	773
198,213	Same same	Dec. 18, 1877	531	164	12	1038
193,616	Renwick, Edward S., Millburn, N. J. Incubator	July 31, 1877	1115	335, 336	12	198
	Republic Refining Company. (*See* Rose, Henry C., assignor.)					
186,270	Requa, Elias B., Jersey City Heights, N. J. Bottle-stopper	Jan. 16, 1877	353	139	11	84
194,466	Requa, Elias B., Jersey City, N. J. Lantern	Aug. 21, 1877	712	212	12	343
195,648	Same same	Sept. 25, 1877	914	272	12	554
189,574	Requa, M. Augusta, and E. Dunn, New York, N. Y. Copy-book	Apr. 17, 1877	580	180	11	651
	Requarth, Frederick A., *et al.* (*See* Schwanengel, Charlys W., assignor.)					
195,534	Respess, William O., and J. L. Lumley, Bath, N. C. Horse-detacher	Sept. 25, 1877	806	239	12	538
193,997	Resser, Moses W. and P., Geneseo, Ill. Stalk-cutter	Aug. 7, 1877	197	59, 60	12	261
	Resser, Phillip. (*See* Resser, Moses W. and P.)					
	Retallic, Thomas A. (*See* Sullivan & Retallic.)					
190,903	Rettig, George, assignor of one-half interest to F. Benzinger, Chicago, Ill. Corn-wrapper	May 15, 1877	814	240	11	868
193,832	Retty, Sebastian, assignor of one-third interest to J. Dodds, Dayton, Ohio. Horse hay-rake	Aug. 7, 1877	34	11	12	239
	Reversible Collar Company. (*See* Snow, George K., assignor.)					
186,877	Reyburn, William S., and F. J. Martin, Philadelphia, Pa. Lightning-rod coupling	Jan. 30, 1877	1080	334	11	187
	Reymer, James C., *et al.* (*See* Schaub, John, assignor.)					
191,177	Reynier, Nicolas E., Paris, assignor to C. B. M. Du Breil, Quimerch en Bannalec, France. Electric light	May 22, 1877	1097	328	11	914
	Reynolds & Reynolds. (*See* Reynolds, Ira, assignor.)					
197,798	Reynolds, Alexander, Oswego, N. Y. Coffee-mill	Dec. 4, 1877	94	28	12	959
	Reynolds, Andrew J. (*See* Reynolds, John H., A. Q., and A. J.)					
	Reynolds, Asa Q. (*See* Reynolds, John H., A. Q., and A. J.)					
190,368	Reynolds, Asa Q., Chicago, Ill. Automatic fruit-drier	May 1, 1877	147	73, 74	11	778
192,190	Reynolds, Davis B., assignor of one-half interest to W. L. French, Brockton, Mass. Machinery for forming box-toes for boots and shoes	June 19, 1877	693	213	11	1085
194,175	Same Combined cane and camp-stool	Aug. 14, 1877	411	123	12	295
192,281	Reynolds, Dexter, Albany, N. Y. Type-distributing machine	June 19, 1877	793	241, 242	11	1098
196,826	Reynolds, Dexter, Albany, and J. Thorne, Port Richmond, N. Y. Type-setting machine	Nov. 6, 1877	86	27	12	773
7,727	Reynolds, George H., assignor to self and C. H. Delamater, New York, N. Y. Hoisting-machine (Reissue)	June 5, 1877	227	71	11	1008
187,906	Reynolds, George H., assignor of part interest to C. H. Delamater and G. H. Robinson, New York, N. Y. Air-compressor	Feb. 27, 1877	1008	311	11	364

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
193,250	Reynolds, George H, assignor of one-half interest to C. H. Delamater and G. H. Robinson, New York, N. Y. Guide-pulley for ropes and bands	Oct. 16, 1877	593	172	12	660
191,467	Reynolds, George W., Boston, Mass. Corset-clasp	May 29, 1877	1384	417	11	961
7,905	Reynolds, Harvey A., Brooklyn, N. Y. Producing stereoscopic pictures (Reissue)	Oct. 9, 1877	390		12	624
193,998	Same same	Aug. 7, 1877	198		12	261
189,264	Reynolds, Henry S., Green Point, N. Y. Bail-eye former	Apr. 3, 1877	232	77	11	589
197,496	Reynolds, Hiram, Des Moines, assignor of one-half interest to W. H. Roundy, Marshalltown, Iowa. Fence-post	Nov. 27, 1877	817	244	12	904
	Reynolds, Ira. (*See* Reynolds, Lucius D. and I.)					
186,216	Reynolds, Ira, assignor to Reynolds & Reynolds, Dayton, Ohio. Metallic hook-back	Jan. 16, 1877	407	125	11	78
193,035	Reynolds, Ira, assignor to I. and L. D. Reynolds, Dayton, Ohio. Book and cover	July 10, 1877	491	148	12	87
193,036	Same Book-binding	July 10, 1877	492	148	12	87
193,037	Same Temporary binder	July 10, 1877	494	148	12	88
	Reynolds, John H., *et al.* (*See* Guyer, Hugh, assignor.)					
187,905	Reynolds, John H., A. Q., and A. J., Chicago, Ill. Automatic fruit-drier	Feb. 27, 1877	1006	311	11	364
	Reynolds, John R. (*See* Johnson, M. Carlyle, assignor.)					
	Same (*See* Pratt & Reynolds.)					
187,174	Reynolds, John R., Essex, Vt., assignor to G. C. Lewis, Washington, D. C. Seed-planter attachment for hoes	Feb. 6, 1877	240	79	11	235
188,948	Reynolds, John R., Essex, Vt. Refrigerator	Mar. 27, 1877	1004	308	11	540
195,167	Reynolds, John W., assignor of one-half interest to G. T. Bassett, Washington, D. C. Bill-file	Sept. 11, 1877	427	126	12	468
	Reynolds, Joshua G. (*See* Brewer, John, assignor.)					
	Reynolds, L. D. (*See* Reynolds, Ira, assignor.)					
192,878	Reynolds, Lucius D. and I., Dayton, Ohio. Book and cover	July 10, 1877	348	102	12	67
	Reynolds, Obadiah B., *et al.* (*See* Behrens, George E., assignor.)					
195,649	Reynolds, Samuel D., Rochelle, Ill. Horse-collar	Sept. 25, 1877	916	272	12	554
7,563	Reynolds, Samuel F., Auburn, N. Y., assignor of one-half interest to C. S. Trowbridge. Machine for tempering sickle-sections (Reissue)	Mar. 20, 1877	763	235	11	499
190,904	Reynolds, Samuel G., Bristol, R. I. Plow	May 15, 1877	815	240	11	868
190,621	Reynolds, Silas, Sugar Grove, Ill. Post for wire fences	May 8, 1877	526	156	11	823
	Reynolds, Stephen H. (*See* Hood & Reynolds.)					
	Reynolds, William L, *et al.* (*See* Glover, William H., assignor.)					
187,049	Reynolds, William L., Saint Louis, Mo. Barbed fence-wire	Feb. 6, 1877	128	42	11	220
	Reynolds, William M., *et al.* (*See* Shedlock, Alfred, assignor.)					
196,991	Reynolds, William M., New York, N. Y. Dental impression-cup	Nov. 13, 1877	274	81	12	807
197,977	Same Dental spittoon	Dec. 11, 1877	279	85	12	994
185,964	Reynoso, Alvaro F. C., Paris, France. Apparatus for manufacturing sulphurous acid	Jan. 2, 1877	152	46, 47	11	23
194,785	Rhoades, Edward, Rockford, Ill. Churn	Sept. 4, 1877	31	10	12	404
187,907	Rhoades, Edward, assignor to self and C. W. Farrington, Rockford, Ill. Rotary churn	Feb. 27, 1877	1010	311	11	364
192,598	Rhoades, Mathias P., Cadiz, and J. A. J. Trickle, Clamo, Wis. Windmill	July 3, 1877	42	12	12	18
	Rhoads, R. A. (*See* Clow, Henry A., assignor.)					
196,388	Rhoads, William G., Philadelphia, Pa. Water-closet hopper and seat	Oct. 23, 1877	745	215	12	690
	Rhode, John. (*See* Wilson & Rhode.)					
	Rhodes, Charles W., *et al.* (*See* Clum, Henry A., assignor.)					
185,965	Rhodes, John H., Brooklyn, N. Y. Water-distributer	Jan. 2, 1877	153	47	11	28
	Rhodes, Milton. (*See* Henderson & Rhodes.)					
186,878	Rhodes, Radford C., and W. F. Holden, Crawfordsville, Ga. Horse-power	Jan. 30, 1877	1081	334	11	187
192,282	Rhodes, William H., Elyria, Ohio. Tree and post hole digger	June 19, 1877	795	242	11	1098
193,673	Rhind, Frank, Brooklyn, N. Y. Lamp	July 31, 1877	1182	354	12	266
197,174	Same Lamp-extinguisher	Nov. 13, 1877	462	136	12	835
	Rhine, John H., *et al.* (*See* Schaub, John, assignor.)					
	Ricart, Thomas L. (*See* Ellis, George A., assignor.)					
	Rice, Arthur W. (*See* Lyman, William J., assignor.)					
	Rice, Barton & Fales Machine and Iron Company. (*See* Tuttle, Warren C., assignor.)					
	Same (*See* Webber, Charles C., assignor.)					
190,251	Rice, Benjamin F., East Weymouth, Mass. Feeding mechanism for cut-nail machines	May 1, 1877	133	40	11	764
195,231	Rice, Byron, West Schuyler, N. Y. Stove	Sept. 18, 1877	505	148	12	487
193,617	Rice, Delos E., Detroit, Mich. Feed-water heater and pump combined	July 31, 1877	1120	336	12	199
194,051	Rice, Edmund, United States Army. Bayouet	Aug. 14, 1877	272	81	12	278
	Rice, E. E. (*See* Barnum, Ashbell, assignor.)					
188,950	Rice, Eliakim, Cazenovia, N. Y. Trunk-catch	Mar. 27, 1877	1007	309	11	540
7,798	Rice, Frank E., Lowell, Mass. Animal-trap (Reissue)	July 17, 1877	793	243	12	135
191,471	Rice, Fred. B., Dunkirk, N. Y. Feed-water heater	May 29, 1877	1387	418	11	961
194,535	Rice, Fred. B., assignor to M. J. Turrell, Dunkirk, N. Y. Valve-motion for steam-engines	Aug. 28, 1877	787	234	12	362
187,984	Rice, Frederick B., Dunkirk, N. Y. Bed-frame for steam-engines	Mar. 6, 1877	29	7	11	384
197,897	Rice, George M., 2d, Worcester, Mass. Apparatus for classifying and concentrating ores	Dec. 4, 1877	190	58	12	973
	Rice, George W. (*See* De Veaux, Samuel, assignor.)					
193,894	Rice, Henry C., Louisiana, Mo., assignor of one-half interest to J. G. Hacking. Strainer, steeper, and clarifier for tea, coffee, &c	Aug. 7, 1877	93	30	12	247
186,045	Rice, Israel L. G., assignor of one-half interest to W. T. Bent, Cambridge, Mass. Winding, uniting, and grouping bobbins	Jan. 9, 1877	238	71	11	48
186,953	Rice, Israel L. G., Cambridge, Mass. Embroidering-machine	Feb. 6, 1877	39	14, 15	11	207
	Rice, J. Marcus. (*See* Vaile, Charles A., assignor.)					
193,893	Rice, Joel, Liberty, Mo. Scraper and ditcher	Aug. 7, 1877	92	30	12	247
190,160	Rice, Matthias J., assignor to self and J. L. Bates, Boston, Mass. Stereoscope	May 1, 1877	50	14	11	753
194,050	Rice, Nathaniel B., East Saginaw, Mich. Recovering phosphoric acid used in manufacture of gelatine	Aug. 14, 1877	271		12	278
193,831	Rice, Obed M., assignor to E. D. Smith, jr., and S. M. Rice, Rochester, N. Y. Stench-trap	Aug. 7, 1877	33	11	12	239
192,010	Rice, Robert M., and F. M Gortner, Keota, Iowa. Feed-steamer	June 12, 1877	492	151	11	1046
	Rice, Sarah M., *et al.* (*See* Rice, Obed M., assignor.)					
192,233	Rice, T. Marshall, Kalamazoo, Mich., assignor to Davis Sewing Machine Company, Watertown, N. Y. Embroidering attachment for sewing-machines	June 19, 1877	796	242	11	1098
196,827	Rice, Walter H., assignor of one-half interest to E. W. Dickerman, Westfield, Mass. Whip and cane handle	Nov. 6, 1877	89	28	12	773
198,522	Rice, William B., Modesto, and J. C. Hoult, Stockton, Cal. Harvester and thrasher	Dec. 25, 1877	850	259	12	1093
187,175	Rice, William E., Worcester, Mass. Compound telegraph-wire	Feb. 6, 1877	241	79	11	235
196,168	Rice, William H., New York, N. Y. Counterfeit-coin detector	Oct. 16, 1877	506	148	12	648

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
7,797	Rich, Augustus E., Fall River, Mass., assignor of two-thirds interest to J. H. Crittenden. Bottle-stopper (Reissue)	July 17, 1877	791	243	12	135
189,059	Rich, Augustus E., assignor of one-third interest to J. H. Crittenden, Fall River, Mass. Hose coupling	Apr. 3, 1877	46	16	11	565
197,292	Rich, Dwight B., assignor of one-half interest to D. Loring, Boston, Mass. Paddle-wheel	Nov. 20, 1877	595	176	12	862
188,756	Rich, Francis A., assignor of one-third interest to J. H. Jones, Grand Rapids, Mich. Gaging and centering tool	Mar. 27, 1877	806	246, 247	11	513
189,141	Rich, George L., Rockland, Me. Combined chair and work-table	Apr. 3, 1877	111	40	11	574
196,934	Rich, Jason and M., Hastings, Mich. Plow	Nov. 6, 1877	208	61	12	789
	Rich, Moses. (*See* Rich, Jason and M.)					
195,400	Richard, Edmond O., St. Roche, Canada. Chain and belt coupling for railway-car brakes	Sept. 18, 1877	665	197	12	510
190,369	Richard, Jean E., New York, N. Y. Ventilator for vehicles	May 1, 1877	249	74	11	779
7,940	Richardi, Robert, Belleville, Ill. Making wooden scoops (Reissue)	Nov. 6, 1877	240	72	12	794
	Richards, Carrie V., *et al.* (*See* Beck, Jacob P., assignor.)					
188,260	Richards, Celius E., North Attleborough, Mass., assignor of one-half interest to S. Scholfield, Providence, R. I. Hat	Mar. 13, 1877	301	95	11	427
188,951	Same. same	Mar. 27, 1877	1008	309	11	541
188,675	Richards, Charles V., assignor to self and F. W. Swan, Garland, Me. Skirt-supporter	Mar. 20, 1877	117	220	11	493
191,884	Richards, George, Flatbush, N. Y. Lamp-chimney fastening	June 12, 1877	364	112	11	1029
185,968	Richards, George A., New London, Conn., assignor to self and S. A. Bailey, Woonsocket, R. I. Vehicle-spring	Jan. 2, 1877	156	48	11	29
	Richards, Henry. (*See* Traut & Richards) (Reissue.)					
186,954	Richards, Henry, New Britain, Conn. Wrench	Feb. 6, 1877	40	15	11	207
191,370	Richards, Joseph, Battle Mountain, Nev. Ore-Washer	May 29, 1877	1286	389	11	918
192,191	Same. Ore-separator	June 19, 1877	696	213	11	1085
192,839	Richards, Lewis, Braintree, Mass. Boot and shoe heel protector	July 10, 1877	311	91	12	63
	Richards, Marcius C. (*See* Farley & Richards.)					
188,188	Richards, Marcius C., Oswego, Ill. Liquid-measure	Mar. 6, 1877	224	70, 71	11	409
191,468	Richards, Marcius C., assignor to self and H. W. Farley, Oswego, Ill. Barbed fence	May 29, 1877	1285	418	11	961
187,985	Richards, Phillip W., Boston, Mass. Piston-packing	Mar. 6, 1877	30	8	11	384
188,952	Same. Machine for making piston-packing	Mar. 27, 1877	1008	309	11	541
198,684	Richards, Theron A., assignor to C. H. Wright, trustee, Brooklyn, N. Y. Machinery for cutting continuous sheets of rubber	Dec. 25, 1877	1004	305	12	1116
187,315	Richards, William, Woodhull, Ill. Coal-scuttle	Feb. 13, 1877	400	126	11	268, 269
197,896	Richards, William H., Pittsburg, Pa. Ratchet-drill	Dec. 4, 1877	189	57	12	973
193,727	Richardson, Benjamin A., Norfolk, Va. Torpedo-guard	July 31, 1877	1226	363	12	213
193,895	Same. Fire-escape	Aug 7, 1877	91	30	12	247
193,462	Richardson, Calvin O., San Francisco, Cal. Indicator for mining-shafts	July 24, 1877	944	287	12	165
	Richardson, Charles C. (*See* Richardson, George M. and C. C.) (Reissue.)					
191,178	Richardson, Charles H., Philadelphia, Pa. Revolving fire-arm	May 22, 1877	1093	328	11	914
188,953	Richardson, Charles M., and J. S. Gibbs, Bridgeport, Conn. Paper-bag machine	Mar. 27, 1877	1009	310, 311	11	541
	Richardson, Charles W. (*See* Hall & Richardson.)					
7,946	Richardson, Francis B., Boston, Mass. Enema syringe (Reissue)	Nov. 13, 1877	492	146	12	839
197,565	Richardson, George, Lowell, Mass. Spindle bolster and step for spinning-machines	Nov. 27, 1877	889	265	12	914
7,836	Richardson, George M. and C. C., Dana, Mass., assignors to W. H. Field, Port Chester, N. Y. Horse hay-rake (Reissue)	Aug. 7, 1877	237	69	12	266
	Richardson, Henry A. (*See* Bond, Nathan O., assignor.)					
	Richardson, Henry A., *et al.* (*See* Boynton, Nathaniel A., assignor) (Reissue.)					
	Richardson, Henry M., *et al.* (*See* Lallement, Pierre, assignor) (Reissue.)					
	Richardson, Henry T., *et al.* (*See* Boynton, Nathaniel A., assignor) (Reissue.)					
7,755	Richardson, Ivory N., Malden, Mass., assignor to I. W. Richardson, Malden, Mass. Playing-card (Reissue)	June 19, 1877	853	258	11	1105
7,756	Same. same (Reissue)	June 19, 1877	851	258	11	1105
7,757	Same. same (Reissue)	June 19, 1877	855	259	11	1105
	Richardson, Ivory W. (*See* Richardson, Ivory N., assignor) (Reissue.)					
191,369	Richardson, James R., Majority Point, Ill. Desk	May 29, 1877	1285	388	11	948
	Richardson, J. Franklin. (*See* O'Dell, Charles A., assignor.)					
185,966	Richardson, John, Lincoln, England. Portable engine	Jan. 2, 1877	154	47	11	28
188,676	Richardson, John, New York, N. Y. Hydrant	Mar. 20, 1877	718	220	11	493
189,266	Richardson, John, Ancaster Township, Canada. Fallow-cultivator	Apr. 3, 1877	233	78	11	590
192,284	Richardson, John, New York, N. Y. Folding-chair	June 19, 1877	797	243	11	1098
191,470	Richardson, John T., Harrisburg, Pa., assignor to Pennsylvania Steel Company. Railway-frog	May 29, 1877	1286	418	11	961
187,043	Richardson, Joseph D., Wheeler's Mills, Ky. Hydraulic-engine	Feb. 6, 1877	127	42	11	220
193,282	Richardson, Joseph H., Philadelphia, Pa. Lamp and lantern	July 17, 1877	754	231	12	130
194,176	Richardson, Josiah V., assignor to self and R. E. Richardson, Tuckerman, Ark. Fence	Aug. 14, 1877	413	124	12	296
189,265	Richardson, Julius C., Philadelphia, Pa., assignor of one-half interest to T. Hooker, Syracuse, N. Y. Gimlet and twist-drill	Apr. 3, 1877	232	77	11	590
	Richardson, Leonard. (*See* Leland, Edwin A., assignor.)					
196,251	Richardson, Lucien B., North English, Iowa. Fence	Oct. 16, 1877	595	172	12	660
187,559	Richardson, Milo A., West Stratford, Conn. Ornamenting castings and protecting the surface of the same	Feb. 20, 1877	646		11	308
192,011	Richardson, Milton T., Brooklyn N. Y. Portable lamp-stove	June 12, 1877	493	151	11	1046
	Richardson, Moses C. (*See* Johnson, Moses, assignor.)					
189,957	Richardson, Nathan H., Fitchburg, Mass. Measuring-mechanism for rattan-machines	Apr. 24, 1877	978	299, 300	11	711
	Richardson, R. E. (*See* Richardson, Josiah V., assignor.)					
197,176	Richardson, William, Boston, Mass. Button-fastening	Nov. 13, 1877	463	137	12	835
	Richardson, William H. (*See* Hobson, B. James, assignor.)					
185,967	Richardson, William H., Philadelphia, Pa. Umbrella	Jan. 2, 1877	155	47	11	28
	Richardson, William M., *et al.* (*See* Blackinton, Jesse, assignor.)					
197,175	Richardson, Winfield S., Philadelphia, Pa. Car-brake	Nov. 13, 1877	462	136	12	835
194,467	Riches, Algernon S., Glenbulah, Wis. Folding-ladder	Aug. 21, 1877	714	213	12	343
	Richman, Alfred B. (*See* Murphin, Joseph, assignor.)					
196,702	Richmond, Almon B., Meadville, Pa. Clock-pendulum	Oct. 30, 1877	1067	310	12	746
198,683	Richmond, Charles C., Boston, Mass. Lamp-burner	Dec. 25, 1877	1003	305	12	1116
144,534	Richmond, Daniel, Rochester, N. Y. Stove and furnace grate	Aug. 28, 1877	786	233, 234	12	362
196,828	Richmond, Gilbert M., Chicago, Ill. Machine for preparing feathers for dusters	Nov. 6, 1877	90	28	12	773

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
193,726	Richmond, Henry C., Allegheny, Pa. Air-feeding device for furnaces	July 31, 1877	1225	368	12	213
	Richmond, Herbert, *et al.* (*See* Egerton, C. Calvert, assignor.)					
190,516	Richmond, Leonard V., Sand Lake, N. Y. Suspenders	May 8, 1877	421	123	11	809
	Richmond, Walter S., *et al.* (*See* Egerton, C. Calvert, assignor.)					
192,715	Richner, Levi, Mansfield, Ill. Piston	July 3, 1877	161	46	12	35
188,674	Richoux, Louis, assignor of one-third interest to C. L. Abry, New York, N. Y. Temporary binder	Mar. 20, 1877	717	220	11	492
186,879	Richter, Daniel, New York, N. Y. Sample-card for neck-ties	Jan. 30, 1877	1082	335	11	187, 188
193,461	Richter, Ernst H., Jersey City, N. J. Condenser for spelter-retorts	July 24, 1877	944	287	12	165
191,469	Rick, Friedrich, Detroit, Mich. Plow	May 29, 1877	1385	418	11	961
186,271	Rickard, Peter J., De Kalb, Ill. Fence-post	Jan. 16, 1877	454	139	11	84
	Rickendorfer, Joseph. (*See* Benson, Henry C., assignor.)					
	Rickendorfer, Jos. (*See* Walpnski, Charles, assignor.)					
	Ricker, James A., *et al.* (*See* Hudson, Andrew J., assignor.)					
186,955	Ricketson, John H., Allegheny, Pa. Composition casting metal for making rolls, &c.	Feb. 6, 1877	41		11	207
188,949	Rickett, Thomas, Northfield, England. Machine for the manufacture of screws	Mar. 27, 1877	1005	308, 309	11	540
192,936	Ricketts, Thomas K., Maysville, Ky. Fire-escape	July 10, 1877	396	118	12	75
197,978	Riddle, Charles M., Venango County, Pa., assignor of one-half interest to I. R. Riddle. Churn	Dec. 11, 1877	280	85	12	994
	Riddle, I. R. (*See* Riddle, Charles M., assignor.)					
187,560	Riddle, William N., Caddo Grove, Tex. Sulky-plow	Feb. 20, 1877	646	201	11	308
189,905	Rideout, William A., Richmond, Me. Hose-coupling	Apr. 24, 1877	934	284	11	704
192,012	Rider, Alexander K., Walden, N. Y. Friction device for controlling motion	June 12, 1877	494	151	11	1046
192,455	Same. Roller for sliding doors	June 26, 1877	768	297	11	1155
195,843	Same. Sand-molding apparatus for casting metal articles	Oct. 2, 1877	147	42	12	582
196,703	Rider, Charles M., Newark, Ohio. Scale-beam	Oct. 30, 1877	1068	310	12	746
187,416	Rider, Jacob W., Altoona, Pa. Pump	Feb. 13, 1877	497	159	11	281
186,436	Rider, Leman P., Pittsburg, Pa. Grate-bar for furnaces	Jan. 23, 1877	649	198	11	120, 121
193,180	Same. Grate for furnaces	July 17, 1877	639	194	12	115
193,181	Same. Grate for furnaces, &c	July 17, 1877	640	195	12	115
186,625	Ridge, Joseph, Chicago, Ill. Hand-rest	Jan. 23, 1877	826	255	11	144
198,156	Riding, William, Norristown, Pa. Loom	Dec. 11, 1877	452	109	12	1020
190,692	Ridler, George, Rickardsville, Iowa. Butter-worker	May 15, 1877	616	183	11	842
197,741	Ridsdale, George L., Marinette, Wis. Artificial limb	Dec. 4, 1877	35	11	12	951
	Rieckel, Ernst. (*See* Kip & Rieckel.)					
	Riegle, David F., *et al.* (*See* Cornell, George W., assignor.)					
195,535	Rieman, Howard, Baltimore, Md. Lard-cooler	Sept. 25, 1877	807	239	12	538
	Ries, Henry T. (*See* Lauhach, Barghausen & Ries.)					
195,401	Riesdorph, John, Burlington, Vt. Fire-escape	Sept. 18, 1877	666	197	12	510
186,167	Rieseck, Peter, Allegheny, Pa. Compensating journal	Jan. 9, 1877	348	106	11	63
	Reissner & Co., C. (*See* Frey, John A., assignor) (Reissue.)					
	Rife, George W., *et al.* (*See* Gamble, James W., assignor.)					
7,590	Rigby, James, Montreal, Canada. Process and apparatus for manufacturing illuminating-gas (Reissue).	Apr. 3, 1877	279	90, 91	11	595
186,692	Same. Apparatus for manufacturing gas from petroleum, &c.	Jan. 30, 1877	895	277	11	163
189,575	Same. Gas apparatus	Apr. 17, 1877	581	180, 181	11	651
189,576	Same. Process and apparatus for manufacturing gas from petroleum, &c	Apr. 17, 1877	583	181	11	651
189,655	Rigby, Nicholas L., Winfield, Kans. Lamp	Apr. 17, 1877	660	204	11	661
189,786	Rigden, Isaac, Cincinnati, Ohio. Platform-scales	Apr. 17, 1877	793	283, 284	11	678
195,168	Rigg, James, Dubuque, Iowa. Vehicle-seat awning	Sept. 11, 1877	428	127	12	468
196,829	Riggs, Charles G., Turin, N. Y. Milk cooler	Nov. 6, 1877	91	28	12	773
194,725	Riggs, George S., Micanopy, Fla. Fan attachment	Aug. 28, 1877	957	284	12	386
	Riggs, Leonard C., *et al.* (*See* Jones, Evan J., assignor.)					
187,483	Rightor, William R., Helena, Ark. Pocket-knife	Feb. 20, 1877	580	179	11	299
187,561	Same. Flexible can-spout	Feb. 20, 1877	647	201	11	308
198,214	Same. Rotary steam-engine	Dec. 18, 1877	531	161	12	1038
189,958	Riker, Carrell L., New York, N. Y. Refrigerator-building	Apr. 24, 1877	979	300	11	711
191,256	Same. Manufacture of ice	May 29, 1877	1191	358	11	935
187,176	Riley, Alberta, Cambridgeport, assignor to G. Farwell, Salem, Mass. Detachable collar	Feb. 6, 1877	242	79	11	235
195,952	Riley, Bernard J., Kearney, N. J. Umbrella tip-cup	Oct. 9, 1877	275	77	12	697
192,456	Rinehold, William, assignor to self and J. C. Fair, Ari, Ind. Gate	June 26, 1877	789	297	11	1135
	Ringer, William. (*See* Blackmer, Ringer & Van Ostrander.)					
193,283	Risdon, Theodore H., and W. W. Tyler, Mount Holly, N. J. Turbine-wheel	July 17, 1877	754	231	12	130
195,402	Rison, Marcellus H., Paris, Tenn. Sash-fastener	Sept. 18, 1877	667	197	12	510
193,833	Ritchel, Charles F., Corry, Pa. Compound and ornamental lumber	Aug. 7, 1877	35	11	12	239
194,373	Ritchie, Charles, Brixton, England. Apparatus for heating and lighting	Aug. 21, 1877	613	184	12	330
193,552	Ritchie, Edward S., Brookline, Mass. Azimuth circle for attachments to ships' compasses	July 24, 1877	1034	311	12	176
190,622	Rittenberry, John W., assignor of part interest to W. A. Bell and A. B. Colwell, Cloverdale, Tenn. Wagon	May 8, 1877	526	156	11	823
	Rittenhouse, John P. (*See* Thompson, Merritt L., assignor.)					
187,672	Rittenhouse, Samuel, Pioneer, Ohio. Wind-wheel	Feb. 20, 1877	753	234	11	322
193,728	Same. Windmill	July 31, 1877	1227	368	12	213
	Ritter, Charles B. (*See* Sleeper, Louisa F., assignor.)					
	Ritterband, Joanna. (*See* O'Neill, Hugh, assignor.)					
188,677	Ritty, Sebastian, assignor of part interest to J. Dodds and T. Mathison, Dayton, Ohio. Horse hay-rake	Mar. 20, 1877	719	221	11	493
196,935	Ritz, Arthur G., Independence, Kans. Breast-strap for harness	Nov. 6, 1877	209	61	12	789
	Ritz, Philip. (*See* Girvin, Elim K., assignor.)					
196,597	Rivera, James B., Baltimore, Md. Duplex steam-boiler	Oct. 30, 1877	967	280	12	732
185,969	Rivers, Daniel R., Centreville, Tenn. Pea-nut cleaner	Jan. 2, 1877	157	48	11	29
192,599	Rivers, Lewis W., Salt Lake City, Utah. Carpet-stretcher	July 3, 1877	43	13	12	18
195,953	Rivers, Louis, Auburn, Oreg. Washing-machine	Oct. 9, 1877	275	78	12	607
197,799	Rix, Benjamin F., Mason, Mich. Platform-gear for wagons	Dec. 4, 1877	95	29	12	959
193,834	Rix, Guy S., Concord, N. H. Lathe for turning wood	Aug. 7, 1877	35	12	12	239
187,908	Roach, David F., Atlanta, Ill. Hay-loader	Feb. 27, 1877	1012	312	11	364
	Roach, Francis. (*See* Zane, Joseph, assignor.)					
7,571	Roach, Francis, assignor to self and J. Zane, Boston, Mass. Faucet (Reissue)	Mar. 27, 1877	1064	327	11	548

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
193,729	Roach, Micheal E., Rolling Prairie, Ind. Sulky stalk-cutter	July 31, 1877	1228	368	12	213
189,060	Roache, James E., and W. F. Redding, assignors to said Redding, New York, N. Y. Pencil-sharpener	Apr. 3, 1877	46	17	11	565
194,843	Robaugh, George W., Ottumwa, Iowa. Pump	Sept. 4, 1877	86	28	12	413
187,910	Robb, Byron H., Belleview, Ky. Lamp-extinguisher	Feb. 27, 1877	1013	312	11	365
187,177	Robb, Isaac, and B. Selph, Lynchburg, Ohio. Scraper	Feb. 6, 1877	243	80	11	235, 236
195,650	Robb, James A., San Francisco, Cal. Saw-mill set-work	Sept. 25, 1877	916	273	12	554
190,782	Robbins, Charles F., Brooklyn, N. Y. Rear sight for fire-arms	May 15, 1877	703	208	11	853
187,485	Robbins, Elisha, Cotuit Port, Mass. Anchor-fluke supporter and tripper	Feb. 20, 1877	582	180	11	299
197,055	Robbins, Elisha, Cotuit, Mass. Soil-breaker and irrigator	Nov. 13, 1877	338	100	12	817
197,980	Robbins, Elisha, Cotuit, assignor to E. F. Robbins, Reading, and N. T. Gorham, Boston, Mass. Deck-support for ships' masts	Dec. 11, 1877	282	86	12	995
	Robbins, Elisha F., *et al.* (*See* Robbins, Elisha, assignor.)					
	Robbins, Horace W., *et al.* (*See* McAvoy, Hugh L., assignor) (Reissue.)					
189,387	Robbins, Ira, Hughesville, Pa. Lock for fire-arms	Apr. 10, 1877	378	122	11	616
188,955	Robbins, Julius, Auburn, N. Y. Holdback attachment for hames	Mar. 27, 1877	1014	311	11	541
187,909	Robbins, Parker D., Harrellsville, N. C. Saw-sharpening machine	Feb. 27, 1877	1013	312	11	365
186,168	Robbins, Richard B., Adrian, Mich. Corn-harvester	Jan. 9, 1877	349	106, 107	11	63
187,235	Same.....Cultivator	Feb. 13, 1877	317	102, 103	11	257, 278
188,956	Roberts, Almon B., Brooks, Me. Horse-detacher	Mar. 27, 1877	1015	312	11	511
193,284	Same.....Vehicle-holdback	July 17, 1877	756	232	12	130
195,232	Roberts, Andrew J., Boston, assignor to self and M. E. Hawes, Somerville, Mass. Horshoe-machine	Sept. 18, 1877	506	149	12	487
197,566	Roberts, Andrew J., Boston, Mass. Machine for making horseshoes	Nov. 27, 1877	890	265	12	914
192,840	Roberts, Charles, Mount Pleasant, Iowa. Bake-pan	July 10, 1877	311	91	12	63
186,759	Roberts, Charles C., assignor to M. Dow, Cleveland, Ohio. Fruit-basket	Jan. 30, 1877	955	297	11	172
193,039	Roberts, Charles M., Washington, D. C. Process and machinery for manufacture of flour	July 10, 1877	495	149, 150	12	88
191,885	Roberts, David A., Columbus, Ohio. Indexing	June 12, 1877	365	112	11	1029
187,316	Roberts, David S., Boston, Mass. Sash-fastener	Feb. 13, 1877	401	127	11	269
195,728	Roberts, Edward A. L., Titusville, Pa. Adjuster for pistons or polish-rods of oil-well pumps	Oct. 2, 1877	39	12	12	566
	Roberts, Edward F. (*See* Goodwin, William F., assignor.)					
192,014	Roberts, George S., Meredith, N. H. Car-window	June 12, 1877	496	152	11	1046
	Roberts, Henry. (*See* Kelley, Charles E., assignor.)					
187,673	Roberts, Jacob, Brooklyn, N. Y. Extension device for chandeliers	Feb. 20, 1877	754	234	11	322
189,577	Roberts, Jacob R., D. P. Rowe, and L. S. Lane, Morristown, Tenn. Clothes-pounder	Apr. 17, 1877	585	181	11	651
	Roberts, James A. (*See* Brown & Roberts.)					
	Roberts, Jonathan H., *et al.* (*See* Howard, William H., assignor.)					
197,898	Roberts, Leonard C., Nunda, N. Y. Reciprocating churn	Dec. 4, 1877	191	58	12	978
191,073	Roberts, Levi H., Morley, Mich. Tool-handle	May 22, 1877	999	297	11	901
	Roberts, Osmore O. (*See* Sis oo, George P., assignor)					
	Same.....(*See* Tobin, James C., assignor.)					
187,484	Roberts, Osmore O., Northampton, Mass. Thill-coupling	Feb. 20, 1877	581	180	11	299
196,705	Roberts, Theodore H., assignor to Michigan Stove Company, Detroit, Mich. Stove-leg fastening	Oct. 30, 1877	1070	311	12	746
197,981	Roberts, Thomas, and T. Cadugan; said Cadugan assignor to said Roberts, Springfield, Ohio. Crushing and grinding mill	Dec. 11, 1877	282	86	12	995
186,367	Roberts, Thomas E., Ionia, Mich. Spark arrester and consumer	Jan. 16, 1877	562	171	11	97
189,322	Roberts, Webster, Cleveland, Ohio. Horseshoe-machine	Apr. 10, 1877	323	102, 103	11	608
194,536	Roberts, Webster, and M. E. Benjamin, Cleveland, Ohio. Fire-escape	Aug. 28, 1877	788	234	12	362
191,372	Roberts, William, Liverpool, England. Machine for painting laths	May 29, 1877	1288	389	11	949
197,667	Roberts, William S., Martinsburg, assignor of one-half interest to I. C. Shaw, Parker Township, Pa. Coupling for sucker-rods	Nov. 27, 1877	989	295	12	929
196,042	Robertshaw, Frederic W., Pittsburg, Pa. Bung	Oct. 9, 1877	365	104	12	621
191,074	Robertson, Adam, assignor to self and H. B. Mason, Blanchardsville, Wis. Machine for punching metal	May 22, 1877	999	298	11	901
192,013	Robertson, Albert J., Monroe, Me. Potato-digger	June 12, 1877	495	151, 152	11	1016
	Robertson, Alexander. (*See* Doyle, John, assignor.)					
190,371	Robertson, Harvey G., Asheville, N. C. Washing-machine	May 1, 1877	251	75	11	779
192,937	Robertson, James, Brooklyn, N. Y. Double-acting pump	July 10, 1877	397	118	12	75
192,192	Robertson, John, Brooklyn, N. Y. Machine for making plumbers' traps	June 19, 1877	697	213, 214	11	1085
	Robertson, John L., *et al.* (*See* Blakey, Mildred, assignor.)					
	Robertson, Thomas. (*See* Thomas & Robertson.)					
191,179	Robertson, William J., and P. Knight, Jasper County, Mo. Cultivator	May 22, 1877	1099	328	11	914
190,370	Robertson, William T., Asheville, N. C. Clothes-pounder	May 1, 1877	250	75	11	779
190,372	Robertson, William T., assignor of one-half interest to J. W. Cheek, Asheville, N. C. Clothes-pounder	May 1, 1877	252	75	11	779
	Robey, James. (*See* Johnson & Robey.)					
	Robie, John E., *et al.* (*See* Fletcher, Thomas, assignor.)					
	Robin, Aug. (*See* Garcia, Rufino C., assignor)					
	Robin, Lucien. (*See* Ronsel, Delangre & Robin) (Reissue.)					
	Robinson, Albert M. (*See* Robinson, Francis D., assignor) (Reissue.)					
193,553	Robinson, Andrew J., Troy, N. Y. Hot-air furnace	July 24, 1877	1038	311	12	176
188,261	Robinson, Azel T., assignor to G. A. Jones, Bristol, Conn. Clock-case	Mar. 13, 1877	302	95	11	427
196,704	Robinson, Charles, Cambridgeport, Mass. Toy bird	Oct. 30, 1877	1069	310	12	746
193,348	Robinson, Charles H., Memphis, Tenn. Well-boring apparatus	July 24, 1877	837	256	12	150
197,177	Robinson, Charles H., Saint Paul, Minn. Friction-clutch	Nov. 13, 1877	464	137	12	835
188,113	Robinson, Clark, Eau Claire, Wis. Clevis for plows	Mar. 13, 1877	456	142	11	443
191,472	Robinson, Clark, and J. F. Ellis, Eau Claire, Wis. Snap-hook	May 29, 1877	1388	419	11	961
7,581	Robinson, Daniel T., Boston, Mass., assignor, by mesne assignments, to H. W. Putnam, Bennington, Vt. Bottle-stopper (Reissue.)	Mar. 27, 1877	1080	332, 333	11	550
	Robinson, David, jr. (*See* Butterfield, George, assignor) (Reissue.)					
8,008	Robinson, Francis D., assignor to A. M. Robinson, Boston, Mass. Latch for doors. (Reissue)	Dec. 25, 1877	1060	322	12	1123
	Robinson, George H., *et al.* (*See* Reynolds, George H., assignor.)					
191,371	Robinson, Gilbert, jr., New York, N. Y. Folding crate	May 29, 1877	1287	389	11	949
194,844	Same.....Sectional packing-box	Sept. 4, 1877	87	29	12	413

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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188,957	Robinson, Harvey J., Carpenteria, Cal. Seed-planter	Mar. 27, 1877	1015	312	11	541
	Robinson, Henry F. (*See* Miles & Robinson.)					
189,877	Robinson, Ithamer A., assignor of one-half interest to J. F. Glidden, De Kalb, Ill. Culinary-boiler	Apr. 24, 1877	906	277	11	701
190,373	Robinson, James H., Christiana, Pa., assignor of one-half interest to C. Arthur, New London Township, Pa. Machine for dressing the fly-bars of paper-mill rolls	May 1, 1877	253	75	11	779
	Robinson, James M., *et al.* (*See* Fox, Francis J., assignor)	(Reissue.)				
185,970	Robinson, James R., Shawnee Mound, Mo. Lever-pawl and ratchet for operating wagon-brakes, &c	Jan. 2, 1877	157	48	11	29
196,041	Robinson, John H., Fall River, Mass. Side-bar wagon	Oct. 9, 1877	364	104	12	620
	Robinson, John R. (*See* Mortimer & Robinson.)					
188,189	Robinson, John S., Canandaigua, N. Y. Annealing castings	Mar. 6, 1877	226	71	11	410
	Robinson, John T. (*See* Spring & Robinson.)					
	Robinson, John W. (*See* Hubbard & Robinson.)					
195,403	Robinson, Samuel E., Mount Vernon, Ohio. Wrench	Sept. 18, 1877	668	198	12	510
186,061	Robinson, Lyman, Matteawan, N. Y. Sewing-machine	Jan. 9, 1877	253	76	11	50
190,723	Robinson, Martin, East Somerville, assignor to self and O. P. Prescott, South Boston, Mass. Washing-machine	May 15, 1877	653	194	11	847
	Robinson, Peter, *et al.* (*See* Chittenden, Morgan, assignor.)					
	Robinson, Samuel L. (*See* Dobbs & Robinson.)					
198,685	Robinson, Sylvanus E., Newark, N. J. Wrench	Dec. 25, 1877	1007	306	12	1116
195,049	Robinson, Walter W. H., Georgetown, assignor of one-third interest to E. C. Dean, Washington, D. C. Apparatus for heating railway-cars, &c	Sept. 11, 1877	307	93	12	449
	Robinson, William M. (*See* Drew & Robinson.)					
	Same (*See* Drew, Walter J., assignor.)					
	Same (*See* St. John, Robinson & Shepard.)					
185,836	Robison, Charles H., Cleveland, Ohio. Machine for making hexagonal nut-blank bars	Jan. 2, 1877	22	7, 8	11	11
	Robison, David M. (*See* Ogle & Robison.)					
196,252	Robottom, Henry M., assignor of one-third interest to W. P. Thompson, Liverpool, Great Britain. Stem winding and setting watch	Oct. 16, 1877	595	172	12	650
186,437	Robson, John, Pittsburg, Pa. Manufacture of hook eyes	Jan. 23, 1877	650	198	11	121
	Roby, Charles W. (*See* Mitchell, James C., assignor.)					
191,613	Roby, Malachiah, Kosciusko, Miss. Combined cotton scraper and cultivator	June 5, 1877	95	30	11	989
191,886	Roch, Joseph, and J. Colas, Montreal, Canada. Fire-escape	June 12, 1877	365	112	11	1029
198,251	Rock, Alexander D., Eureka, Nev. Nut-lock	Dec. 18, 1877	584	177	12	1045
192,349	Rock, Joseph C., and J. W. Phillips, Washington, D. C. Pavement	June 26, 1877	890	267	11	1122
196,043	Rockwell, George P., Baltimore, Md. Manufacture of alum	Oct. 9, 1877	366		12	621
	Rockwell, Rollin D., *et al.* (*See* Wilson, William H., assignor.)					
193,896	Rockwill, James, Ponca, Nebr. Car-coupling	Aug. 7, 1877	94	30	12	248
	Roddick, Thomas. (*See* Walker & Roddick.)					
196,102	Rodebaugh, George W., Jackson, Mich. Saw-mill dog	Oct. 16, 1877	439	128	12	639
195,454	Rodebaugh, James H., Buffalo, N. Y. Chair	Sept. 25, 1877	733	216	12	527
190,678	Rodenhausen, Leonhard, Philadelphia, Pa. Dumping-wagon	Apr. 24, 1877	1118	339	11	728
192,015	Rodgers, Alexander, Muskegon, Mich. Head-block for saw-mills	June 12, 1877	496	152	11	1046
192,016	Same. Friction-wheel for saw-mills	June 12, 1877	497	152	11	1047
196,389	Rodgers, Henry D., New York, N. Y. Fare-register	Oct. 23, 1877	746	215	12	690
191,474	Rodgers, Thomas W., assignor to E. H. Ashcroft, Boston, Mass. Furnace-door	May 29, 1877	1390	419	11	961
190,905	Rodier, Edward, Hunter's Point, N. Y. Bung and bush combined	May 15, 1877	816	241	11	868
197,226	Rodier, Louis C., Springfield, Mass. Check-valve	Nov. 20, 1877	531	157	12	853
197,227	Same. Gate-valve	Nov. 20, 1877	532	157	12	853
	Roe, Daniel H (*See* Roe, H. H. and D. H.)					
185,837	Roe, Henry H. and D. H., Madison, Ohio. Pail and can	Jan. 2, 1877	23	8	11	12
	Roebling Sons Company, John A. (*See* Swan, Charles, assignor.)					
	Roebuck, Samuel. (*See* Flood, William, assignor.)					
191,473	Roebuck, Samuel, Brooklyn, N. Y. Adjustable window-screen	May 29, 1877	1389	419	11	961
195,651	Roelecke, Oscar, Baltimore, Md. Splitting and bundling wood	Sept. 25, 1877	918	273	12	554
185,870	Roemer, W., Newark, N. J. Traveling-bag, satchel, &c	Jan. 2, 1877	54	17	11	16
190,906	Roemer, William, Newark, N. J. Belt-buckle	May 15, 1877	817	241	11	868
190,907	Same. Lock for satchels	May 15, 1877	817	241	11	869
195,233	Same. Combined lock and handle for traveling-bags	Sept. 18, 1877	510	149	12	487
190,724	Roettgerr, William C. A., Brussels, Belgium. Artificial flowers	May 15, 1877	654		11	847
187,317	Roff, Almon, Southport, Conn. Self-adjusting trec-shield	Feb. 13, 1877	402	127	11	269
191,257	Rogé, Henri N., E. Poret, P. H. Baffoy, and P. S. E. Dupré, Paris, France. Preserving wood and other vegetable matter	May 29, 1877	1192		11	935
	Rogers, Alfred F. (*See* Rogers, Charles E. and A. F.)					
190,623	Rogers, Charles, Allegheny, Pa. Capstan	May 8, 1877	527	157	11	823
186,956	Rogers, Charles D., assignor to American Screw Company, Providence, R. I. Apparatus for pickling wire	Feb. 6, 1877	42	15	11	207
187,732	Same. Machine for drawing wire	Feb. 27, 1877	832	259	11	341
190,908	Rogers, Charles E., La Crosse, Wis. Teething-nipple	May 15, 1877	818	241	11	869
197,407	Rogers, Charles E. and A. F., Boston, Mass. Stringing and tuning device for pianos	Nov. 20, 1877	712	213	12	880
190,449	Rogers, Charles J., assignor of one-half interest to J. M. Brewer, Norwich, Conn. Lantern	May 8, 1877	353	102	11	800
186,499	Rogers, Charles K., Oswego Falls, N. Y. Washing-machine	Jan. 23, 1877	701	216	11	128
	Rogers, Charles W. (*See* Healey & Rogers.)					
	Rogers, Edward E. (*See* Sedmihradsky, Adolph J., assignor.)					
7,848	Rogers, Edward F., Chelsea, Mass., assignor, by mesne assignments, to self and L. L. Holden. Apparatus for burning hydrocarbon	(Reissue.) Aug. 14, 1877	525	158	12	310
187,236	Rogers, Edward F., Chelsea, Mass. Vapor-burner	Feb. 13, 1877	319	103	11	258
195,169	Rogers, Ethan, Cleveland, Ohio. Hydraulic brick-machine	Sept. 11, 1877	428	{127 128	}12	468
7,736	Rogers, George, Mount Vernon, Ohio. Traction-engine	(Reissue.) June 12, 1877	511	166	11	1052
193,897	Rogers, Harry, Janesville, Wis., assignor to self and J. H. Rogers. Shaking and dumping grate for furnaces	Aug. 7, 1877	95	31	12	248
	Rogers, Homer. (*See* Moore & Rogers.)					
	Rogers, Horace B. (*See* Hendrick, Dexter D., assignor.)					
193,038	Rogers, James J., Binghamton, N. Y. Table-beverage	July 10, 1877	495		12	88
198,467	Same. Beer	Dec. 25, 1877	798		12	1086
186,498	Rogers, John, Brooklyn, N. Y. Process and apparatus for making lamp-black	Jan. 23, 1877	703	216	11	128
	Rogers, John H. (*See* Rogers, Harry, assignor.)					
	Rogers, John I. (*See* Ferry, Daniel J., assignor.)					
	Rogers, Joseph C. (*See* Sedmihradsky, Adolph J., assignor.)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Rogers, Josiah W., *et al.* (*See* Winslow, Freeman, assignor.)					
194,265	Rogers, Josiah W., assignor to self and F. Winslow, Salem, Mass. Shoe-press bed	Aug. 14, 1877	493	149	12	307
197,408	Rogers, Julius W., West Meriden, Conn. Electro-plating frame	Nov. 20, 1877	713	213	12	881
188,306	Rogers, Lebbeus H., New York, N. Y. Envelope	Mar. 13, 1877	346	109	11	433
192,131	Same.....Letter-sheet and envelope	June 19, 1877	635	194	11	1077
191,180	Rogers, Luman, Pittsburg, Pa. Sucker rod	May 22, 1877	1100	328	11	914
	Rogers, Robert A., *et al.* (*See* Schaeffer, Arthur I., assignor.)					
194,178	Rogers, Robert A., and H. L. R. Wolf, Dayton, Ohio. Paper box	Aug. 14, 1877	414	124	12	296
195,309	Rogers, Thomas B., jr., Brooklyn, asssignor to self and P. Cooper, New York, N. Y. Shutter bower and fastener	Sept. 18, 1877	583	170, 171	12	498
	Rogers Upright Piano Company. (*See* Elliot, Joseph D., assignor.)					
	Rogers, William B. (*See* Bliven, Charles, assignor.)					
189,061	Rogers, William C., Chicago, Ill. Lock for sliding-doors	Apr. 3, 1877	47	17	11	565
194,177	Rogers, William W., Indianapolis, Ind. Folding bedstead	Aug. 14, 1877	413	124	12	296
197,946	Rogers, William W., United States Army. Cartridge-belt	Dec. 11, 1877	245	76	12	990
	Rogge, Christian. (*See* Cooke, Alfred E., assignor.)					
188,414	Rohde, Conrad H., Chicago, Ill. Table-leaf support	Mar. 13, 1877	457	142	11	448
196,540	Rohn, Julius W., Milwaukee, Wis. Hydrant-valve	Oct. 30, 1877	912	264	12	724
192,235	Rohrbacher, Frederick, and F. Hormann, Philadelphia, Pa. Exhaust and blowing fan	June 19, 1877	798	243	11	1098
	Roller, William H. (*See* Mullin, Thomas, assignor.)					
194,845	Rollin, Daniel G., New York, N. Y. Fabric for carpet-lining, &c	Sept. 4, 1877	83		12	413
198,045	Rollins, George M., assignor to H. M. Rollins, Brooklyn, N. Y. Roller-skating surface	Dec. 11, 1877	340	105	12	1004
	Rollins, Helen M. (*See* Rollins, George M., assignor.)					
198,158	Roloson, Frederick, Baltimore, Md. Combined refrigerator and counter	Dec. 11, 1877	458	142	12	1021
185,971	Romadka, Antonny V., Milwaukee, Wis. Combined corner-clamp guard and bolt for trunks	Jan. 2, 1877	158	48	11	29
	Romer, Heinrich E. (*See* Meissner, Romer & Anke.)					
	Rommelsbacher, Charles. (*See* Gross, William, assignor.)					
	Rone, David P. (*See* Roberts, Rone & Lane.)					
	Roney, Alexander B. (*See* Porteous & Roney.)					
191,373	Roney, James, Scotland, Md., and T. Roney, Hyde Park, Ill. Broom	May 29, 1877	1289	390	11	949
	Roney, Thomas. (*See* Roney, James and T.)					
	Ronian, George F., *et al.* (*See* Sloan, James D., assignor.)					
189,578	Rooney, Patrick G., Cincinnati, Ohio. Apparatus for the redistillation of spirits	Apr. 17, 1877	586	181	11	651
196,044	Roos, Matthias, Chicago, Ill. Vegetable-cutter	Oct. 9, 1877	367	104	12	631
189,323	Root, Corydon A., Andover, and D. W. Strickland, Wellington, Ohio. Iron fence	Apr. 10, 1877	326	103	11	609
192,350	Root, Corydon A., Andover, Ohio. Fence	June 26, 1877	891	267	11	1132
194,052	Root, Corydon A., assignor of one-half interest to L. W. Merrell, Andover, Ohio. Cross-cut-saw handle	Aug. 14, 1877	272	81	12	278
192,084	Root, Datus N., assignor to O. F. Hodges, Parkersburg, Iowa. Coupling for well-auger shafts	June 19, 1877	590	179	11	1071
198,215	Root, Francis H., assignor to Jewett & Root, Buffalo, N. Y. Parlor-stove	Dec. 18, 1877	532	165	12	1038
193,182	Root, Henry C., Virginia City, Nev. Saw-set and file-guide	July 17, 1877	641	195	12	116
188,190	Root, John B., Green Point, N. Y. Apparatus for washing light or finely-pulverized substances	Mar. 6, 1877	228	71	11	410
188,305	Root, John B., New York, N. Y. Metallic tubing	Mar. 13, 1877	346	109	11	432
188,938	Root, John B., Port Chester, N. Y. Air-pump and condenser	Mar. 27, 1877	1016	312	11	542
196,253	Same.....Air-compressing apparatus	Oct. 16, 1877	597	173	12	660
	Root, Lawrence O. (*See* Baker & Root.)					
195,234	Root, Lawrence O., and L. I. Baker, East Minneapolis, Minn. Apparatus for extinguishing fires in car-stoves	Sept. 18, 1877	511	149	12	488
197,899	Root, Sylvester, Kentland, Ind. Fire-escape	Dec. 4, 1877	192	58	12	978
194,266	Röpe, Henry W., assignor of one-half interest to H. O. Towles, Washington, D. C. Child's folding crib	Aug. 14, 1877	494	150	12	307
190,374	Ropes, George, Boston, Mass. Lock for cell-doors	May 1, 1877	254	76	11	779
198,686	Ropes, Julius, Ishpenning, Mich. Type-case	Dec. 25, 1877	1007	306	12	1116
192,017	Rorick, John C., Wauseon, Ohio. Bevel-rule	June 12, 1877	498	153	11	1047
193,131	Rorke, Hugh B., Fulton, N. Y. Plaiting-machine	July 17, 1877	600	181	12	109
190,161	Rose, Charles A., Providence, R. I. Sleeve or cuff button	May 1, 1877	50	14	11	753
194,179	Rose, Charles W., Hudson, Mich. Wheelbarrow	Aug. 14, 1877	415	124	12	296
192,018	Rose, Clemens B., Miller's Falls, Mass., by B. S. Parker, administrator. Bit-stock	June 12, 1877	499	153	11	1047
194,925	Rose, Clemens B., deceased, by B. S. Parker, administrator, Greenfield, Mass. Locking-latch and handle for same	Sept. 4, 1877	169	52, 53	12	423
195,170	Rose, George P., Freeport, Ill. Whip-socket and rein-holder	Sept. 11, 1877	432	129	12	469
195,536	Same.....Whip-socket	Sept. 25, 1877	808	239	12	538
195,652	Rose, Henry C., assignor to Republic Refining Company, Cleveland, Ohio. Apparatus for distilling petroleum	Sept. 25, 1877	918	273	12	554
198,688	Rose, Henry M., Waterman, Ill. Barbed fence-wire	Dec. 25, 1877	1009	306	12	1116
196,706	Rose, Israel M., Green Point, N. Y. Lighting device	Oct. 30, 1877	1070	311	12	746
196,769	Rose, John H., and D. M. Somers, New York, N. Y. Embroidering attachment for sewing-machines	Nov. 6, 1877	30	9	12	765
189,498	Rose, Morris, New York, N. Y. Sawing-machine	Apr. 10, 1877	485	154	11	630
196,707	Same.....Circular-sawing machine	Oct. 30, 1877	1072	311	12	747
194,455	Rose, Reuben M., Williamsburg, N. Y. Hair-curling device	Sept. 25, 1877	733	217	12	527
198,687	Rose, Reuben M., Brooklyn, N. Y., assignor to Wilson Sewing Machine Company, Chicago, Ill. Darning attachment for sewing-machines	Dec. 25, 1877	1008	306	12	1116
191,075	Rose, Rufus H., Liverpool, England. Can-opener	May 22, 1877	1000	298	11	901
192,286	Rose, Samuel L., Rose Grove, Iowa. Overshot water-wheel	June 19, 1877	799	243	11	1098, 1099
186,272	Rosebrooks, John H., Hoosick Falls, N. Y. Grain-binder	Jan. 16, 1877	455	139, 140	11	84
188,818	Rosello, Antonio, Baltimore, Md. Carpet-fastener	Mar. 27, 1877	882	268	11	523
193,779	Rosenfield, Anthony, Jersey City, N. J. Till-lock alarm	July 31, 1877	1278	384	12	221
197,178	Rosenkranz, Jean, La Salle County, Ill. Corn-planter	Nov. 13, 1877	464	137	12	835
190,079	Rosenqvist, Gustav, Saint Louis, Mo. Coal-cabinet	Apr. 24, 1877	1119	340	11	723
196,481	Rosenstock, Moritz, Hoboken, N. J. Dress-train supporter	Oct. 23, 1877	833	240	12	702
197,409	Same.....Panier	Nov. 20, 1877	714	218	12	881
188,415	Rosenthal, Elias, Baltimore, Md. Combined table, sideboard, and safe	Mar. 13, 1877	458	142	11	448
188,959	Rosenthal, Henry, New York, N. Y. Brush	Mar. 27, 1877	1017	312	11	542
196,482	Roser, Nicolas, Paris, France. Steam-boiler	Oct. 23, 1877	834	240	12	702
186,880	Ross, Abbott Q., Cincinnati, Ohio. Toy horse and carriage	Jan. 30, 1877	1083	335	11	188
195,844	Ross, Barney, Amwell, Ohio. Rail-joint	Oct. 2, 1877	150	43	12	582
186,368	Ross, David M., Teegarden, Ind. Lifting-jack	Jan. 16, 1877	563	171	11	97

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198,216	Ross, Hugh, sr., Plattsburg, assignor to S. Butler, Mooers, N. Y. Machine for upsetting bars and tires	Dec. 18, 1877	533	105	12	1039
190,984	Ross, John D., Macon, Ga. Car-coupling	May 22, 1877	917	271	11	889
188,960	Ross, John W., Piqua, Ohio. Water wheel and gate	Mar. 27, 1877	1018	313	11	542
190,450	Ross, Monroe L., New York, N. Y. Automatic cigar-lighter	May 8, 1877	354	103	11	891
187,178	Ross, Roderick G., and F. A. L. Cassidey, Wilmington, N. C. Fruit-crate	Feb. 6, 1877	244	80	11	236
193,554	Ross, Simon, assignor to self and G. A. Vandegrift, Cincinnati, Ohio. Millstone-dressing device	July 24, 1877	1039	311	12	176
194,726	Ross, William A., Belfast, Ireland. Bottling-machine	Aug. 28, 1877	957	284	12	386
	Rosser, John. (*See* De Veaux & Rosser.)					
7,979	Rosser, Thomas H., Selma, Ala. Self-raising lard (Reissue)	Dec. 4, 1877	222		12	978
193,716	Same same	July 3, 1877	161		12	35
198,046	Rossiter, Lindsey, Port Carbon, assignor of one-third interest to E. C. Rambo, Bridgeport, Pa. Car-axle box	Dec. 11, 1877	340	106	12	1004
186,438	Rote, John F., Reading, Pa. Ice-cream freezer	Jan. 23, 1877	650	199	11	121
197,410	Roth, Andrew, New Orleans, La. Printing photographic pictures	Nov. 20, 1877	715		12	881
196,830	Roth, Charles F., Winterset, assignor of two-thirds interest to J. J. Hutchings and N. W. Munger, Madison, Iowa. Wire-stretcher	Nov. 6, 1877	92	28	12	774
	Roth, Joseph I. (*See* Scott & Roth.)					
189,267	Rothan, Nicholas L., Cincinnati, Ohio. Sheet-metal elbow	Apr. 3, 1877	234	78	11	590
	Rothe, Wilhelm. (*See* De Beaumont, Alexandre, assignor.)					
194,976	Rothmann, Emanuel, Paterson, N. J. Bed-crib	Sept. 11, 1877	223	71	12	439
192,685	Rothschild, Alexander, and T. S. Birch, Hartford, Conn. Bed-lounge	June 19, 1877	591	180	11	172
189,787	Rothschild, Samuel, jr., Brooklyn, N. Y. Nursery gas and heating stove	Apr. 17, 1877	795	244	11	678
192,659	Rothwell, John, assignor to Bridesburg Manufacturing Company, Philadelphia, Pa. Loom for weaving looped or pile fabrics	July 3, 1877	114	31	12	27
198,689	Roulstone, Edward A. G., Boston, Mass. Tag-fastener	Dec. 25, 1877	1009	307	12	1116
	Roundtree, James L., *et al.* (*See* Roundtree, John T., assignor.)					
192,287	Roundtree, John T., assignor of two-thirds interest to J. L. Roundtree and W. W. Jessee, Martinsville, Mo. Portable fence	June 19, 1877	802	244	11	1099
	Roundy, William H. (*See* Reynolds, Hiram, assignor.)					
186,626	Rousseau, David, assignor to self and W. C. Smith, New York, N. Y. Railway-switch	Jan. 23, 1877	827	255	11	144, 145
187,318	Rousseau, David, and W. C. Smith, assignors to W. F. Smith and S. Samuels, New York, N. Y. Circuit-closer for electric railway-signals	Feb. 13, 1877	402	127	11	269
7,556	Roussel, Julien, L. Delangre, and L. Robin, Nantes, France, assignors to P. W. Flower, Briton Ferry, and W. Flower, London, England. Decorating tin plates, cans, &c. (Reissue)	Mar. 13, 1877	510		11	455
	Routh, John S. (*See* Routh, Oswald J. and S.)					
193,183	Routh, Oswald and J. S., New York, N. Y. Book-binding	July 17, 1877	643	195	12	116
191,614	Rouze, Alanson L., B. A. Ledford, and J. O'Brien, Denver, Colo.; said O'Brien assignor to said Ledford. Steamboat smoke-stack	June 5, 1877	95	30	11	989
191,181	Row, Edward, Indiana, Pa. Fire-escape	May 22, 1877	1101	329	11	914
189,656	Rowan, Thomas, Haverstraw, N. Y. Machine for punching sheet-metal	Apr. 17, 1877	661	204	11	664
186,169	Rowbottom, John S., Wilmington, Del. Snapper-sounder or toy	Jan. 9, 1877	352	107	11	64
193,780	Rowe, James H., New York, N. Y., assignor to C. S. Bradford, Westchester, Pa. Plaiting-machine	July 31, 1877	1279	384, 385	12	221
193,618	Rowe, Reuben G., and L. B. Edington, Waterloo, N. Y. Hub-boring machine	July 31, 1877	1121	336	12	199
189,788	Rowe, William F., assignor to E. S. Gibbs, Lyons, Iowa. Tire-tightener	Apr. 17, 1877	795	245	11	678
190,375	Rowell, Benning, West Sparta, assignor of one-half interest to G. M. Osgoodby, Nunda, N. Y. Car-coupling	May 1, 1877	255	76	11	780
192,390	Rowell, Guilford D., assignor to Appleton Manufacturing Company, Appleton, Wis. Cultivator-teeth	June 26, 1877	932	279	11	1127
187,319	Rowell, Harvey, Columbus, Wis. Breech-loading fire-arm	Feb. 13, 1877	403	127	11	269
191,076	Rowell, Horace N., Concord, N. H. Circuit-closer for electro-magnetic railway-switch signals	May 22, 1877	1002	298	11	901
187,486	Rowell, Theodore B., Beaver Dam, Wis. Universal shaft-coupling	Feb. 20, 1877	583	180	11	290
192,351	Rowland, Edward, Elmwood, Ill. Wagon-end gate	June 26, 1877	892	268	11	1122
189,789	Rowland, Ellis and G. E., Manchester, assignors of one-half interest to R. Harlow, Heaton-Norris, England. Fire-bar for furnaces	Apr. 17, 1877	797	245	11	678
	Rowland, George E. (*See* Rowland, Ellis and G. E.)					
195,171	Rowland, Horace B., and W. S. Gayde, Cheltenham, assignors to said Rowland and L. Rowland, Philadelphia, Pa. Jack for vehicles	Sept. 11, 1877	433	129	12	469
	Rowland, Lynford. (*See* Rowland & Gayde, assignors.)					
7,591	Rowland, Thomas F., Green Point, N. Y. Machine for charging gas-retorts (Reissue)	Apr. 3, 1877	284	91	11	595
7,592	Same Apparatus for raking gas-retorts (Reissue)	Apr. 3, 1877	286	91	11	595
7,630	Same Measuring coal and feeding it to retort chargers (Reissue)	Apr. 24, 1877	1165	354	11	734
7,631	Same Apparatus for filling gas-retort charges (Reissue)	Apr. 24, 1877	1167	354	11	735
192,288	Rowland, Thomas F., Brooklyn, N. Y. Retort charging and discharging apparatus	June 19, 1877	803	244, 245	11	1099
192,289	Same Gas-retort charger	June 19, 1877	804	245, 246	11	1099
192,290	Same Gas-raking apparatus	June 19, 1877	807	246, 247	11	1100
192,291	Same Revolving coal-meter	June 19, 1877	811	247, 248	11	1100
195,954	Rowland, Thomas F., New York, N. Y. Marine safe	Oct. 9, 1877	277	78	12	608
196,311	Same Valve	Oct. 23, 1877	670	193	12	679
192,938	Rowland, Thomas J., New York, N. Y. Apparatus for circulation of fluids for heating purposes	July 10, 1877	399	119	12	75
189,499	Rowlands, John R., Lancaster, Ohio. Device for lighting night-lamps	Apr. 10, 1877	486	154	11	630
	Rowlett, Caroline N., *et al.* (*See* Rowlett, Joseph F., assignor.)					
	Rowlett, Hannah A., *et al.* (*See* Rowlett, Joseph F., assignor.)					
197,056	Rowlett, Joseph F., assignor to C. N. and H. A. Rowlett, Richmond, Ind. Strip	Nov. 13, 1877	339	100	12	817
194,053	Rowlinson, William, Fallbarrow, Windermere, England. Armor-plating for ships, forts, and like structures	Aug. 14, 1877	273	81	12	278
194,054	Roy, Fereol, Amherstburg, Canada. Car-coupling	Aug. 14, 1877	274	81	12	278
186,957	Roy, Joseph, Montreal, Canada. Reclining-chair	Feb. 6, 1877	44	15	11	207, 208
195,653	Roy, Joseph, Philadelphia, Pa. Machine for forging horseshoe-nails	Sept. 25, 1877	920	274	12	555
193,384	Royal, George, Truckee, Cal. Snow-plow	July 24, 1877	871	267	12	154
198,468	Same same	Dec. 25, 1877	798	242	12	1086
	Royer, Alfred. (*See* Bush, Charles E., assignor.)					
191,374	Royer, Herman, San Francisco, Cal. Rawhide belting-rope	May 29, 1877	1289	390	11	949

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194,846	Royer, Herman, San Francisco, Cal. Belting	Sept. 4, 1877	88	29	12	413
	Royle, John, jr. (*See* Royle, Vernon and J., jr.)					
188,416	Royle, John J., Manchester, Great Britain. Steam-trap	Mar. 13, 1877	459	143	11	449
193,555	Royle, Vernon and J., jr., Paterson, N. J. Routing-machine for engravers' use	July 24, 1877	1040	311	12	177
	Rubber Clothing Company. (*See* Douglas, Bailey B., assignor.)					
195,172	Rubicam, John H., Winchester, Ohio, assignor of one-half interest to W. H. F. Lenfestey and J. S. Hixson. Lifting-jack	Sept. 11, 1877	434	129	12	469
194,374	Rubsam, Jacob B., Springfield, Ohio. Plow-fender	Aug. 21, 1877	614	184	12	330
187,320	Ruch, Jacob, Mount Eaton, assignor to self and W. M. Johnson, Wilmot, Ohio. Plow	Feb. 13, 1877	405	128	11	269
197,979	Rückwardt, Gottlieb F., Little Falls, N. J. Portable clothes-rack	Dec. 11, 1877	281	86	12	994
191,887	Rudd, Charles H., Chicago, Ill. Duplex telegraph	June 12, 1877	367	113	11	1030
194,786	Rudd, Karl E., Cassopolis, Mich. Gate	Sept. 4, 1877	32	10	12	405
195,537	Same.....Wagon-jack	Sept. 25, 1877	809	240	12	539
195,538	Same.....Gate	Sept. 25, 1877	810	240	12	539
	Rude, P. C., *et al.* (*See* Haptonstall, John, assignor.)					
194,468	Rudeloff, Franz, Buchau, Prussia. Ore-mill for wet-grinding	Aug. 21, 1877	715	213	12	343
	Ruffner, Daniel B. (*See* Dunn, William, assignor.)					
198,314	Ruger, Jean G., Paris, France. Box-iron	Dec. 18, 1877	633	192, 193	12	1053
189,790	Rugg, Joseph K., Newport, Ky. Hydrant	Apr. 17, 1877	798	245	11	671
	Rugg, Julius E., *et al.* (*See* Shattuck, Charles H., assignor.)					
186,273	Rugg, Julius E., Boston, Mass. Reversible seat	Jan. 16, 1877	456	140	11	84
194,977	Ruhlmann, Eugene, Lockport, N. Y. Garden wheel-hoe	Sept. 11, 1877	229	71	12	439
188,678	Ruick, Thomas, assignor of one-half interest to H. S. Hopkins, Saint Louis, Mo. Bridge-joint	Mar. 20, 1877	720	221	11	493
196,936	Rule, Thomas, Durham, England. Apparatus for stoppering bottles, &c	Nov. 6, 1877	210	61	12	789
189,791	Rumble, Alex. C., assignor of one-half interest to C. E. Phinney, Xenia, Ohio. Car-coupling	Apr. 17, 1877	799	245	11	678
	Rumely, John. (*See* Rumely, Meinrad, assignor.)					
189,062	Rumely, Meinrad, assignor of one-half interest to J. Rumely, La Porte, Ill. Friction-clutch	Apr. 3, 1877	47	17	11	565
	Rumsey, Lewis M. (*See* Dean, T. J., assignor)	(Reissue.)				
	Rumsey, Lewis M., *et al.* (*See* Witherell, Orin O., assignor)	(Reissue.)				
198,690	Rumsey, Lewis M., assignor of one-half interest to M. Rumsey, Saint Louis, Mo. Chain-machine	Dec. 25, 1877	1010	307	12	1116
	Rumsey, Moses. (*See* Dean, T. J., assignor)	(Reissue.)				
	Same.....(*See* Rumsey, Lewis M., assignor.)					
	Rumsey, Moses, *et al.* (*See* Witherell, Orin O., assignor)	(Reissue.)				
187,912	Rundle, James N., assignor to self and D. L. Fonseca, San Francisco, Cal. Curry-comb	Feb. 27, 1877	1015	313	11	365
197,057	Rundquist, Peter, and T. Angelo, New York, N. Y. Steam-atomizer	Nov. 13, 1877	340	100	12	817
198,047	Runyan, Alonzo, Clarke County, Ohio. Grain-drill	Dec. 11, 1877	341	106	12	1004
	Runyan, Fred. F., *et al.* (*See* Weber, Theodore A., assignor.)					
	Runyan, Rachel, *et al.* (*See* Weber, Theodore A., assignor.)					
	Runyan, William S., *et al.* (*See* Weber, Theodore A., assignor.)					
	Runyan, W. W. (*See* Manley, Emmons, assignor.)					
	Runyon, Enos, *et al.* (*See* Bradley, James J., assignor.)					
193,619	Ruprecht, Charles, Cleveland, Ohio. Oil-stove	July 31, 1877	1122	337	12	199
193,184	Ruset, Charles F., Brooklyn, N. Y. Fan attachment for rocking-chairs	July 17, 1877	643	195	12	116
193,185	Rush, Andrew J., Nineveh, Pa. Device for depositing feed in troughs	July 17, 1877	644	196	12	116
192,529	Rush, Stephen, Tyrone, Pa. Sash-fastener	June 26, 1877	1065	321	11	1145
192,841	Rushton, William, Atlanta, Ga. Spark-arrester	July 10, 1877	312	91	12	63
192,193	Rushworth, Samuel, assignor to self and J. G. Crawford, New York, N. Y. Lubricator	June 19, 1877	699	214	11	1885
195,654	Russ, Oscar F., Albany, N. Y. Machine for marking scale-beams	Sept. 25, 1877	922	274	12	555
	Russel, L. J. (*See* Willson, Hodgen I., assignor.)					
	Russell & Erwin Manufacturing Company. (*See* Parker, Emery, assignor.)					
	Russell, Albert B., *et al* (*See* Shaw, Ai B., assignor.)					
	Russell, Albert H., *et al.* (*See* Simonds, Calvin W., assignor.)					
187,911	Russell, Albert H., Adrian, Mich. Bee-hive	Feb. 27, 1877	1014	312	11	365
	Russell, Charles A. (*See* Russell, Lester, assignor.)					
	Russell Cutlery Company, John. (*See* Brock, William E., assignor.)					
195,656	Russell, George H., Newburg, Pa. Draft apparatus for stove-pipes and chimneys	Sept. 25, 1877	924	275	12	555
	Russell, Helen M., *et al.* (*See* Spoor, Stephen, assignor)	(Reissue.)				
188,262	Russell, Henry R., Swarthmore College, Pa. Plier	Mar. 13, 1877	303	95	11	427
194,180	Russell, Jasper S., assignor to self and J. Feath, Indiana, Pa. Mortising-chisel	Aug. 14, 1877	415	125	12	296
197,900	Russell, Leonard J., Redwood Falls, Minn. Double-action pump	Dec. 4, 1877	193	58	12	973
190,909	Russell, Lester, assignor of one-half interest to C. A. Russell, Otsego, Mich. Car-starter	May 15, 1877	819	242	11	869
187,417	Russell, Matthew C., assignor of one-half interest to W. R. Wilcox, Deposit, N. Y. Egg-beater	Feb. 13, 1877	498	154	11	281
	Russell, Robert. (*See* Inslee, Joseph H. P., assignor.)					
195,050	Russell, Thomas N., Providence, R. I. Lunch-pail	Sept. 11, 1877	307	93	12	450
195,655	Russell, Thomas W., Union Bridge, Md. Hen's nest	Sept. 25, 1877	922	275	12	555
194,375	Russell, Walter R, and C. Steenken, Norfolk, Va. Combined hoe and shovel	Aug. 21, 1877	615	185	12	330
197,293	Russell, Walter R., Norfolk, Va. Tag-fastener	Nov. 20, 1877	595	176	12	862
196,937	Russell, William F., Wheeling, W. Va. Flower-pot	Nov. 6, 1877	210	61	12	789
192,791	Russell, William H., Brooklyn, N. Y. Temporary binder	July 3, 1877	235	68	12	44
	Rust, William H. (*See* Lenhart, Adam I., assignor.)					
	Rutan, John C. (*See* Rutan, William H, assignor.)					
187,733	Rutan, William H., Des Moines, assignor to John C. Rutan, Iowa City, Iowa. Chain-pump	Feb. 27, 1877	835	260	11	342
	Ruth, Henry W. (*See* Denny, Hervey B., assignor.)					
188,419	Ruthel, Adam, Stettin, Prussia. Cut-off	Mar. 13, 1877	462	143	11	449
186,627	Rutherford, Adam, Walla Walla, Wash Ter. Horse-collar	Jan. 23, 1877	828	255, 256	11	145
188,191	Same.....same	Mar. 6, 1877	229	71, 72	11	410
195,657	Same.....same	Sept. 25, 1877	924	275	12	555
192,879	Rutherford, William, and P. Mitchell, Forfar, Scotland. Store-reacher	July 10, 1877	349	102	12	67
192,939	Rutledge, Charles R. and J. W., Shannondale, Ind. Hog-trap	July 10, 1877	401	120	12	75
	Rutledge, John W. (*See* Rutledge, Charles R. and J. W.)					
	Rutzler, Enoch. (*See* Bennett, William H., assignor.)					
188,961	Ruwart, Henry, Jefferson City, Mo. Saddle	Mar. 27, 1877	1019	313	11	542
186,020	Ryan, Patrick, New York, N. Y. Combined toilet-table and music-stand	Jan. 9, 1877	211	64	11	45
192,600	Ryan, Richard H., New York, N. Y. Lamp-support	July 3, 1877	44	13	12	18
195,658	Ryan, Roger L., San Francisco, Cal. Coin-wrapper	Sept. 25, 1877	926	275	12	555

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186,881	Ryckman, William J., Brooklyn, assignor to self and F. B. Burt, New York, N. Y. Composition for fire-proofing	Jan. 30, 1877	1084		11	188
196,938	Rydbeck, Sven, Red Wing, Minn. Corn-planter	Nov. 6, 1877	211	62	12	789
7,654	Ryder, Benjamin L., Chambersburg, Pa. Fruit-drier (Reissue)	May 1, 1877	303	83	11	786
187,050	Ryder, Joseph L., Islesborough, Me. Rein-support	Feb. 6, 1877	129	42	11	220
	Ryder, William H. (*See* Smith, Ryder & Clark.)					
189,959	Ryerson, Van Buren, New York, N. Y. Apparatus for reducing cereals into flour	Apr. 24, 1877	981	{300 301	11	711
188,192	Rymal, John J., Milwaukee, Wis. Mil'stone-proof	Mar. 6, 1877	230	72	11	410
194,727	Rymal, Peter H., Chicago, Ill. Horse and cattle food	Aug. 28, 1877	959		12	387
186,760	Ryno, Eber H., Wayland, Mich. Truss	Jan. 30, 1877	953	297	11	172
192,880	Ryon, Patrick H., Bridgeport, Conn. Combined hose-nozzle and sprinkler	July 10, 1877	349	103	12	67
190,624	Ryrie, Robert A., assignor of one-half interest to J. W. Donges, Camden, N. J. Boredwell	May 8, 1877	528	157	11	823
186,899	Saber, James D., Stoughton, Mass. Ice-cream receiver	Jan. 30, 1877	1098	340	11	190
	Sabin, Charles T. (*See* Stimson & Sabin.)					
188,074	Sabin, Ransom, Shelby, Mich. Combined drier and smoke-house	Mar. 6, 1877	112	34	11	396
196,939	Sabin, Thomas H., Green Center, Ind. Attaching-device for leather straps	Nov. 6, 1877	212	62	12	789
	Sachs, Samuel. (*See* Dreyfuss & Sachs.)					
	Sachsenberg, Friedrich, *et al.* (*See* Steuberg, Oscar, assignor.)					
	Sachsenberg, Gottfried, *et al.* (*See* Stenberg, Oscar, assignor.)					
195,774	Sackman, John M., assignor to self and J. K. Hammerle, Ridgeville, Ind. Animal-trap	Oct. 2, 1877	78	24	12	572
	Safety Carbureter Company. (*See* Chollar, Byron E., assignor.)					
190,985	Safford, Alonzo T., Pompey Centre, N. Y. Carpet-stretcher	May 22, 1877	918	271	11	889
	Safford, S. H., *et al.* (*See* Walker, Thomas, assignor.)					
7,855	Saladee, Cyrus W., Washington, D. C. Torsion-spring for vehicles (Reissue)	Aug. 21, 1877	758	225	12	349
7,889	Saladee, Cyrus W., Washington, D. C., assignor to W. W. Grier, Hulton, Pa. Pleasure-vehicle (Reissue)	Sept. 18, 1877	705	209	12	516
7,890	Same same (Reissue)	Sept. 18, 1877	707	209	12	516
185,871	Saladee, Cyrus W., Washington, D. C. Side-spar road-wagon	Jan. 2, 1877	54	17	11	16
193,040	Same Road-wagon	July 10, 1877	498	150	12	88
193,068	Same same	July 10, 1877	524	158	12	91
197,668	Same same	Nov. 27, 1877	990	296	12	929
197,669	Same same	Nov. 27, 1877	991	296	12	929
197,670	Same same	Nov. 27, 1877	992	296	12	929
197,671	Same same	Nov. 27, 1877	993	297	12	930
198,217	Same Playing-card	Dec. 18, 1877	534	165	12	1039
192,592	Saladin, Jules A., Nancy, France. Malting of grain	June 19, 1877	813	248	11	1100
187,913	Sale, James H., Boydsville, Ky. Seed-drill	Feb. 27, 1877	1016	313	11	365
	Sale, Morris. (*See* Watkins & Sale.)					
190,080	Salisbury, George P., New Haven, Conn., and C. L. Hunt, Saint Louis, Mo. Cartridge-base former	Apr. 24, 1877	1120	340	11	728
189,500	Salisbury, Levi E., Providence, R. I. Knitting-machine needle	Apr. 10, 1877	487	154	11	630
189,501	Same same	Apr. 10, 1877	488	154	11	630
189,502	Same same	Apr. 10, 1877	489	155	11	630
187,418	Salisbury, Silas C., New York, N. Y., assignor of one-half interest to J. H. Brown, Pittsburg, Pa. Gas-burner	Feb. 13, 1877	499	154	11	281
187,734	Salisbury, Silas C., New York, N. Y. Process and apparatus for manufacturing gas	Feb. 27, 1877	8 6	260	11	342
195,659	Same Producing a hot-blast for metallurgic furnaces	Sept. 25, 1877	927	276	12	555
191,549	Sallada, William H., Monroe, Iowa. Cupboard	June 5, 1877	41	12	11	982
195,845	Salomen, Etienne assignor of one-half int rest to F. M. Pepin and N. J. Co'é; said Coté assignor of one-half interest to E. Hynes, Quebec, Canada. Apparatus for forming heel-counters for boots and shoes	Oct. 2, 1877	151	43	12	582
	Salomon, Siegmund L. (*See* Knoch & Salomon.)					
194,728	Salter, James, Brooklyn, N. Y. Envelope-opener	Aug. 28, 1877	960	285	12	387
	Salter, John, jr. (*See* Smith & Salter.)					
	Salter, John T., *et al.* (*See* Cheney & Butterfield, assignors.)					
	Same (*See* Leighton, James M., assignor.)					
195,404	Salter, Richard and W. J., Covington, Ky. Gas-exhauster	Sept. 18, 1877	668	198	12	510
	Salter, W. James. (*See* Salter, Richard and W. J.)					
	Saltsgaver, John D. (*See* Collins & Saltsgaver.)					
	Saltsman, Elijah. (*See* Saltsman, Irvin and E.)					
188,030	Saltsman, Irvin and E., Avoca, N. Y. Fence	Mar. 6, 1877	73	21	11	390
	Salvaterre, Louis. (*See* Lathrop & Salvaterre.)					
191,182	Sammis, Edward M., New York, N. Y. Camp-stool	May 22, 1877	1102	329	11	915
	Sammis, John B. (*See* Hayes, George W., assignor.)					
189,388	Sammis, John B., and G. W. Hayes, New York, N. Y.; said Hayes assignor to said Sammis. Elastic hub	Apr. 10, 1877	380	122	11	617
187,321	Sample, Jacob R., assignor to self and W. P. Anderson, Liberty, Miss. Seed-planter	Feb. 13, 1877	406	128	11	269
	Sampsel, John E. (*See* Johnson, Enoch M., assignor.)					
	Sampson, Samuel. (*See* Graves, Clinton E., assignor.)					
194,456	Sampson, William S., New York, N. Y. Ventilating grain-car	Sept. 25, 1877	734	217	12	528
191,183	Sampson, Winslow F., assignor to self and N. C. Sampson; said N. C. Sampson assignor to A. L. F. Pike, Norway, Me. Flower-pot supporter	May 22, 1877	1103	329	11	915
186,958	Samson Herman, Ames, assignor of one-half interest to J. A. Dockstader, Sharon Springs, N. Y. Boot and shoe	Feb. 6, 1877	45	16	11	208
197,411	Samson, Hiram, Fillmore, Minn. Draft-equalizer for harvesters	Nov. 20, 1877	715	213	12	881
	Samuels, Samuel, *et al.* (*See* Rousseau & Smith, assignors.)					
	Sanborn, Albert A. (*See* Brown & Sanborn.)					
8,005	Sanborn, Albert A., and C. Burroughs, Newark, N. J. Monkey-wrench (Reissue)	Dec. 18, 1877	772	233	12	1074
195,173	Same same	Sept. 11, 1877	435	129	12	469
186,217	Sanborn, John C., Manchester, N. H., assignor to V. Corliss, Methuen, Mass. Hot-air furnace	Jan. 16, 1877	408	125	11	78
	Sanborn, Peter B., *et al.* (*See* Wood, George H., assignor.)					
195,773	Sanborn, Rufus H., Newark, N. J. Billiard-cue tip	Oct. 2, 1877	77	23	12	572
	Sanborn, Woodbury. (*See* Bunker, Augustus S., assignor.)					
186,062	Sandall, John, jr., St. John, New Brunswick. Ventilator	Jan. 9, 1877	253	76	11	50, 51
190,625	Sander, Henry, Baltimore, Md. Burial-casket	May 8, 1877	529	157	11	824
187,179	Sanders, Henry, San Francisco, Cal. Barrel-tap	Feb. 6, 1877	245	80	11	236
195,660	Sanders, Henry M., assignor of one-half interest to J. Luther and M. W. Wheeler, Worcester, Mass. Ventilator	Sept. 25, 1877	928	276	12	556
	Sanders, John E. (*See* Gaines, George B., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Drg.	Vol.	Page.
191,780	Sanders, J. Milton, assignor to J. H. and C. H. Covel, New York, N. Y. Making cast metal from tinners' scrap	June 12, 1877	263		11	1017
196,831	Sanders, J. Milton, assignor to J. H. Covel; said Covel assignor of one-third interest to G. L. Kelty, New York, N. Y. Manufacture of oxide of tin	Nov. 6, 1877	92	29	12	774
193,969	Sanders, Thomas, and L. C. Nichaolds, Hamburg, Iowa. Harrow and cultivator	Aug. 7, 1877	198	60	12	261
188,417	Sanderson, Daniel B., and D. H. Linscott, Lewiston, Me. Clothes-pin	Mar. 13, 1877	460	143	11	449
194,267	Sanderson, Foster M., assignor to S. N. Sanderson, Cincinnati, Ohio. Ironing apparatus.	Aug. 14, 1877	495	150	12	307
	Sanderson, S. A., *et al.* (*See* Woodward, John A., assignor.)					
	Sanderson, Sarah N. (*See* Sanderson, Foster M., assignor.)					
7,991	Sandham, Frederick, Ottawa, Canada, assignor to C. W. Woodford. Machine for stamping, pressing, and pointing horseshoe-nails (Reissue)	Dec. 11, 1877	487	152	12	1024
189,389	Sands, Charles A., Burlington, Kans. Hop-drier	Apr. 10, 1877	382	122	11	617
189,390	Same.....Butter and fruit jar	Apr. 10, 1877	383	123	11	617
189,960	Same.....Attaching handles to crosscut-saws	Apr. 24, 1877	983	301	11	711
190,252	Same.....Butter-worker	May 1, 1877	135	40	11	764
	Sandwich Manufacturing Company, *et al.* (*See* Philleo & Cox, assignors.)					
	Sanford, Aaron C. (*See* Eichmuller, Robert, assignor.)					
190,626	Sanford, Addison V., assignor to C. S. Sanford, Binghamton, N. Y. Clasp for wrist-bands	May 8, 1877	530	157	11	824
	Sanford Clara S. (*See* Sanford, Addison V., assignor.)					
198,416	Sanford, Gelston, Brooklyn, N. Y. Mechanical movement	Dec. 18, 1877	733	222	12	1067
	Sanford, Samuel T. W. *et al.* (*See* Munson, Albert L., assignor.)					
	Sanford, William H. (*See* Price, George W., assignor.)					
189,579	Sanford William B., assignor to Crano Brothers Manufacturing Company, Chicago, Ill. Tube-welding furnace	Apr. 17, 1877	587	182	11	652
193,186	Sangster, Amos W., assignor of one-half interest to J. Sangster and G. H. Dunbar, Buffalo, N. Y. Lamp-burner	July 17, 1877	645	196	12	116
194,729	Sangster, Amos W., assignor of one-half interest to E. M. Jewett, Buffalo, N. Y. Ozone-machine	Aug. 28, 1877	960	285	12	387
	Sangster, James, *et al.* (*See* Sangster, Amos W., assignor.)					
190,376	Sangster, James, assignor of one-half interest to R. Dunbar & Co., Buffalo, N. Y. Postage and revenue stamp	May 1, 1877	256	76	11	780
194,730	Sangster, James, assignor to E. M. Jewett, Buffalo, N. Y. Meat-cutter	Aug. 28, 1877	962	285	12	387
188,420	Sargeant, Charles E., Chicago, Ill. Register for sleeping-car berths	Mar. 13, 1877	463	144	11	449
190,517	Sargeant, Samuel, Brooklyn, N. Y. Picture-frame	May 8, 1877	421	123	11	809
191,077	Same.....Window-cornice	May 22, 1877	1003	298	11	901
	Sargent & Co. (*See* Tanner, Alfred B., assignor.)					
	Sargent & Son, C. G. (*See* Trombly, Edward, assignor.)					
194,110	Sargent, Charles G. and F. G., Westford, Mass. Machine for picking and burring wool	Aug. 14, 1877	345	103, 101	12	287
197,901	Sargent, David P., Haverhill, Mass. Machine for cutting fabrics	Dec. 4, 1877	194	59	12	973
	Sargent, Frederick G (*See* Sargent, Charles G. and F. G.)					
7,835	Sargent, James, Rochester, N. Y. Time-lock (Reissue)	Aug. 7, 1877	233	69	12	266
7,947	Same.....Combined time-lock, combination-lock, and bolt-work for safes. (Reissue)	Nov. 13, 1877	493	146, 147	12	839
186,369	Same.....Time attachment for locks	Jan. 16, 1877	564	172	11	97
188,962	Same.....Lock for cell-doors	Mar. 27, 1877	1020	313, 314	11	542
190,627	Same.....same	May 8, 1877	530	158	11	824
194,000	Same.....Door-bolt	Aug. 7, 1877	260	60	12	261
195,539	Same.....Combined time lock, combination-lock, and bolt-work for safes, &c	Sept. 25, 1877	810	240	12	539
198,157	Same.....Time-lock	Dec. 11, 1877	455	142	12	1020
187,777	Sargent, John Q. A., Manchester, N. H. Invalid-bedstead	Feb. 27, 1877	881	274	11	347
191,718	Sargent, Joseph B., New Haven, Conn. Bracket	June 5, 1877	193	61	11	1003
192,132	Sargent, Samuel D., assignor to Stanley Rule and Level Company, New Britain, Conn. Bench-plane	June 19, 1877	636	194	11	1077
196,992	Sarmiento, Ferdinand L, assignor to W. A. Fellows and J. Sarmiento, Philadelphia, Pa. Tourist's album	Nov. 13, 1877	275	81	12	807
	Sarmiento, Julia, *et al.* (*See* Sarmiento, Ferdinand L., assignor.)					
190,253	Sarony, Oliver, Scarborough, England. Photographic-printing apparatus	May 1, 1877	135	40	11	764
	Sarrazin, Henri L. E. (*See* Dorsey & Sarrazin.)					
	Satterlee, Le Roy. (*See* Harrold & Satterlee.)					
198,048	Sauer, Martin F., Somonauk, Ill. Collar-pad	Dec. 11, 1877	342	106	12	1005
194,931	Sauerbier, Henry, Newark, N. J. Manufacture of boots	Sept. 4, 1877	175	54	12	421
	Saul, John P. (*See* Philliman, Medad, assignor.)					
	Saunders Sons, D. (*See* Saunders, Alexander, assignor.)					
185,838	Saunders, Alexander, assignor to D. Saunders' Sons, Yonkers, N. Y. Chuck for metal-lathes	Jan. 2, 1877	24	8	11	12
192,391	Saunders, Benjamin, Nashua, N. H. Combined register and stop-motion for spinning-machinery	June 26, 1877	933	280	11	1128
188,543	Saunders, James R., New York, N. Y. Cigarette mouth-piece	Mar. 20, 1877	590	182	11	475
	Saunders, Thomas P. (*See* Gould, Thomas S., assignor.)					
187,419	Saur, Anton, Franklin, Ind. Door-sill	Feb. 13, 1877	500	155	11	281
189,792	Saur, Anton, and J. Wilson, Franklin Ind. Harrow cultivator	Apr. 17, 1877	800	246	11	679
194,376	Saurbrey, George, Columbus, Ohio. Burglar-al rm window-fastening	Aug. 21, 1877	616	185	12	330
187,487	Saurman, Benjamin F., Apalachicola, Fla. Thread-cabinet	Feb. 20, 1877	584	180	11	299
	Savage, J. B. (*See* Barrett, Edward D., assignor.)					
194,001	Savery, Thomas H., assignor to self, J. L. Pusey, W. G. Gibbons, and Lobdell Car Wheel Company, Wilmington, Del. Roll grinding and finishing machine	Aug. 7, 1877	201	61	12	261
7,677	Sawin, James J., Natick, Mass. Treating leather for heels and soles of boots and shoes (Reissue)	May 8, 1877	576	171	11	829
	Sawyer, Byron L. (*See* Bryant, Robert H., assignor.)					
198,218	Sawyer, Charles E., Boston, Mass. Paper bag	Dec. 18, 1877	535	166	12	1039
	Sawyer, Delancy P. (*See* Sawyer, Hilliard E., assignor.)					
187,915	Sawyer, Frederick A., assignor to self, A. H. Baldwin, and A. N. Carter, Houston, Tex. Vapor-burner	Feb. 27, 1877	1018	314	11	365
	Sawyer, George, *et al.* (*See* Shattuck, Charles H., assignor.)					
192,019	Sawyer, Hilliard E., assignor of one-half interest to D. P. Sawyer, South Meridon, Conn. Curtain-fixture	June 12, 1877	500	153	11	1047
189,657	Sawyer, John A. J., Lynn, Mass. Carriage-shaft	Apr. 17, 1877	661	205	11	661
196,390	Sawyer, Leonard, Merrimac, Mass. Top-prop for carriages	Oct. 23, 1877	747	215	12	690
	Sawyer Manufacturing Company. (*See* Dingee, William W., assignor.)					
186,882	Sawyer, Peter C., Macon, Ga. Cotton-gin	Jan. 30, 1877	1084	335	11	188

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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187,914	Sawyer, Sylvester, Philadelphia, Pa. Molding-machine	Feb. 27, 1877	1017	313	11	365
194,562	Sawyer, Thomas J., Pacific, Mo. Railway nut-lock	Aug. 28, 1877	811	241	12	506
191,781	Sawyer, William E., New York, N. Y. Electro-magnetic engine	June 12, 1877	263	82	11	1017
194,111	Same.....Electric engineering and lighting apparatus and system	Aug. 14, 1878	348	104	12	287
194,500	Same.....Electric candle	Aug. 21, 1877	743	221	12	347
194,563	Same.....Electric lighting apparatus	Aug. 28, 1877	812	242	12	506
195,174	Same.....Electro-magnetic-engine commutator	Sept. 11, 1877	436	130	12	469
195,235	Same.....Regulator for automatic telegraphs	Sept. 18, 1877	512	150	12	488
195,236	Same.....Autographic telegraph transmitter	Sept. 18, 1877	514	150	12	488
195,237	Same.....Autographic-telegraph-transfer process	Sept. 18, 1877	515	150	12	488
195,238	Same.....Copying-telegraph-message process	Sept. 18, 1877	516	151	12	488
196,832	Same.....Autographic-telegraph-instrument	Nov. 6, 1877	93	29	12	774
196,833	Same.....Device for effecting the static discharge in autographic telegraphy	Nov. 6, 1877	95	30	12	774
196,834	Same.....Electric engineering and lighting system	Nov. 6, 1877	96	30	12	774
187,674	Sawyer, William H., Philadelphia, Pa. Circuit-closer for burglar-alarms	Feb. 20, 1877	755	234	11	322
192,457	Sax, George, Syracuse, N. Y. Stook-holder	June 26, 1877	789	208	11	1135
8,017	Sax, John K., and G. W. Kear, Pittston, Pa. Car-wheel	(Reissue) Dec. 25, 1877	1072	322	12	1125
186,500	Sax, John K., Pittston, Pa. Manufacture of car-wheels	Jan. 23, 1877	704	216	11	128
197,228	Same.....Mold for casting car-wheels	Nov. 20, 1877	533	157	12	853
	Saxby, John, *et al.* (*See* Livesey, Edwards & Jeffreys, assignors.)					
191,550	Saxe, Charles A., and J. S. Harding, Philadelphia, Pa. Fire-proof safe	June 5, 1877	42	12	11	982
187,675	Saxton, Charles A., Topeka, Kans. Device for exhibiting wall-paper	Feb. 20, 1877	755	234, 235	11	322
	Saxton, E. R. (*See* Amidon, Charles H., assignor.)					
193,349	Saxton, George, Woodbury, and F. H. Saxton, Bristol, Conn. Window-screen	July 24, 1877	837	257	12	150
	Saxton, Frank H. (*See* Saxton, George and F. H.)					
190,518	Sayer, Rudolf, New York, N. Y. Clock-alarm	May 8, 1877	422	133	11	809
186,883	Sayers, William W., Harrodsburg, Ky. Vehicle-spring	Jan. 30, 1877	1085	336	11	188
	Scallen, Edward F. (*See* Toucey & Scallen.)					
	Scantlin, James M. (*See* Scantlin, Thomas, J. M., and T. E.)					
	Scantlin, Thomas E. (*See* Scantlin, Thomas, J. M., and T. E.)					
195,903	Scantlin, Thomas, J. M., and T. E., Evansville, Ind. Iron mantel for fire-places	Oct. 9, 1877	222	63	12	600
	Scarff, Russell A., *et al.* (*See* Winchell, James F., assignor.)					
190,031	Scarlett, Charles W. and W., Aurora, Ill. Barbed-wire fence	Apr. 24, 1877	1121	340	11	728
	Scarlett, William. (*See* Scarlett, Charles W. and W.)					
	Scatchard, Henry F., *et al.* (*See* Hodson, Marquis L., assignor.)					
192,293	Schaaf, Henry, Saint Louis, Mo. Fastening device for furniture	June 19, 1877	816	248	11	1100
189,503	Schade, John, assignor to Gale Lock Manufacturing Company, Stamford, Conn. Key for locks	Apr. 10, 1877	491	155	11	630
192,020	Schade, John, Stamford, Conn. Hub for locks	June 12, 1877	801	153	11	1047
191,615	Schaefer, Christian W., New York, N. Y. Tortoise-shell handle	June 5, 1877	46	20	11	989
	Schaefer, Conrad W., *et al.* (*See* Schwanengel, Charlys W., assignor.)					
192,530	Schaffer, Arthur D., Dayton, Ohio. Paper box	June 26, 1877	1066	321	11	1145
195,904	Schaeffer, Arthur D., assignor to self, R. A. Rogers, D. E. and H. E. Mead, Dayton, Ohio. Paper box	Oct. 9, 1877	223	63	12	601
191,888	Schaeffer, August, and A. Pfrunder, Louisville, Ky. Lamp-reflector	June 12, 1877	368	113	11	10.0
193,041	Schaeffer, Charles, assignor to F. Lambrecht, Washington, D. C. Artificial marble	July 10, 1877	499		12	88
187,237	Schäfer, Frederick W., London, England. Buckle	Feb. 13, 1877	319	103	11	258
189,268	Same.....same	Apr. 3, 1877	235	78	11	590
	Schäffer, Bernhard, *et al.* (*See* Prüsmann, Carl H., assignor.)					
188,679	Schaffer, Charles, assignor to G. W. Cook, Washington, D. C. Compound for artificial stone	Mar. 20, 1877	721		11	493
186,629	Schaffer, John T., assignor of one-third interest to F. G. Zugelder, Rochester, N. Y. Fruit-jar	Jan. 23, 1877	830	256	11	145
192,133	Schaffner, George, Albany, N. Y. Sleigh	June 18, 1877	667	195	11	1077
	Schallhorn, Christopher. (*See* Knapp & Schallhorn.)					
186,628	Schalscha, Julius, Memphis, Tenn. Cigar	Jan. 23, 1877	829	256	11	145
195,405	Same.....Cigar-tip former	Sept. 18, 1877	669	198	12	511
191,719	Schandein, Emil, Milwaukee, Wis. Ice-house	June 5, 1877	194	61	11	1003
197,672	Schappa, Albert M., assignor to W. and E. T. Fitch, New Haven, Conn. Hand-screw clamp	Nov. 27, 1877	994	297	12	930
187,916	Scharff, Anthony, Philadelphia, Pa. Whip	Feb. 27, 1877	1019	314	11	365
190,082	Scharmann, Herman B., Brooklyn, N. Y. Apparatus for cooling liquids	Apr. 24, 1877	1122	340	11	728
	Scharpf, Friederich. (*See* Lomb & Scharpf.)					
194,602	Schaschue, Charles, Roundout, N. Y. Grain-huller	Aug. 7, 1877	202	61	12	61
198,049	Schater, Joseph, assignor of one-half interest to P. Scheller, Syracuse, N. Y. Clothes-drier	Dec. 11, 1877	342	106, 107	12	1005
194,469	Schaub, John, Allegheny, Pa., assignor to self, J. C. Reymer, and J. H. Rhine. Screw-cutting tap and die	Aug. 21, 1877	716	213	12	343
	Scheetz, John D. (*See* Brown, Seymour C., assignor.)					
190,083	Scheffler, Theodore, Paterson, N. J. Valve-gear	Apr. 24, 1877	1123	341	11	728
186,884	Scheibel, Henry, assignor to self and J. Schneider, Bridgeport, Conn. Nutmeg-grater	Jan. 30, 1877	1086	336	11	188
198,691	Scheibel, Henry, jr., G. M. Seeley, and J. Schneider, Bridgeport, Conn. Car-wheel	Dec. 25, 1877	1011	308	12	1117
198,219	Schell, Charles F., jr., assignor of one-half interest to M. Schneider, Buffalo, N. Y. Cake-cutter	Dec. 18, 1877	536	166	12	1039
	Scheller, Phillip. (*See* Schater, Joseph, assignor.)					
197,947	Schelling, Friederich, Hamburg, Germany. Oil-can	Dec. 11, 1877	246	76	12	990
	Schenck, John P. (*See* Judson & Schenck)	(Reissue.)				
194,377	Schenck, Richard H., New York, N. Y. Treadle-operated confluent pump	Aug. 21, 1877	617	185	12	330
186,274	Scherer, Daniel, Maquon, Ill. Gate	Jan. 16, 1877	456	140	11	84
	Scherer, Joseph. (*See* Bradley, Henry, assignor.)					
196,254	Schering, Ernst, Berlin, Germany. Purifying salicylic acid by dialysis	Oct. 16, 1877	599	173	12	660
	Schermerhorn, John P., *et al.* (*See* Bowers, Marcus M., assignor.)					
	Same.....same	(Reissue.)				
198,159	Schermerhorn, Winfield S., Castleton, N. Y. Bottle for promoting vegetation	Dec. 11, 1877	458	143	12	1021
	Schiebler, Hermann. (*See* Petsch & Schiebler.)					
186,171	Schier, Helwig, New York, N. Y. Table-leaf support	Jan. 9, 1877	353	108	11	61
188,820	Schierloh, Hermann, assignor to Schierloh Manufacturing Company, Jersey City, N. J. Manufacture of steel	Mar. 27, 1877	883		11	523
	Schierloh Manufacturing Company. (*See* Schierloh, Hermann, assignor.)					
189,269	Schillinger, John J., New York, N. Y. Supplying beer-kegs with bicarbonate of soda	Apr. 3, 1877	236	79	11	590
187,779	Schimper, Theodore, New York, N. Y. Frame for pocket-books	Feb. 27, 1877	882	274	11	348
196,703	Schindel, S. Milford, Hagerstown, Md. Device for promoting combustion	Oct. 30, 1877	1073	312	12	747

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
7,508	Schindler, Charles W., deceased, by W. Schindler, executor, and E. J. Gerdom, by H. L. Washburn, jr.; said Schindler and Washburn, assignors, by mesne assignments, to A. Cook and P. Bilver, New York, N. Y. Lubricator (Reissue)	Feb. 13, 1877	542	166	11	286
	Schindler, Frederick. (*See* Sondermeyer & Schindler.)					
	Schindler, William, executor. (*See* Schindler & Gerdom) (Reissue.)					
188,545	Schmueller, Jacob, Pittsburg, Pa., and L. Fitzpatrick, Benwood, W. Va. Die for welding chain-links	Mar. 20, 1877	592	183	11	475
194,181	Same. Machine for making chain-links	Aug. 14, 1877	416	125	12	296
198,417	Same. Machine for forming chain-links	Dec. 18, 1877	734	222	12	1008
195,846	Schippert, Simon, Burlington, Iowa. Combined graduated measure and funnel	Oct. 2, 1877	154	43	12	583
	Schirmer, Salomon. (*See* Betts, Jacob, assignor.)					
190,783	Schlaf, Christian H., Rockville, Conn. Loom-temple	May 15, 1877	704	208	11	853
187,180	Schlegel, Edward and W., Boston, Mass. Watch-glass	Feb. 6, 1877	245	80	11	236
	Schlegel, Wenzel. (*See* Schlegel, Edward and W.)					
7,612	Schlenker, Erhard, Buffalo, N. Y., assignor of one-half interest to R. L. Howard. Paper-cutting machine (Reissue)	Apr. 17, 1877	842	260	11	614
190,254	Schlich, Frederick, N. Y. Bottle-stopper fastening	May 1, 1877	136	40	11	764
189,270	Schlickeysen, Charles, Berlin, Prussia. Brick-machine	Apr. 3, 1877	236	79	11	590
190,451	Schlott, John H., Freeport, Ill. Sash-fastener	May 8, 1877	355	103	11	801
194,003	Schlueter, Ernst, Saint Louis, Mo. Swing	Aug. 7, 1877	203	61	12	262
192,531	Schmalz, Louis E., Canton of Berne, Switzerland, assignor of one-half interest to E. A. Corbin, trustee, Philadelphia, Pa. Manufacture of sugar	June 26, 1877	1067	321	11	1145
186,370	Schmauch, George, Mauch Chunk, Pa. Ore and coal jigger	Jan. 16, 1877	567	172	11	97, 98
185,992	Schmeiser, Henry J., Burlington, assignor of one-half interest to J. Schmeiser, Des Moines County, Iowa. Sulky-plow	Jan. 2, 1877	158	49	11	29
	Schmeiser, Jacob. (*See* Schmeiser, Henry J., assignor.)					
187,322	Schmitzer, Louis, Rothenburg on the Tauber, Germany. Sectional toy	Feb. 13, 1877	407	128	11	270
	Schmidgruber, John. (*See* Kimmel & Schmidgruber.)					
7,529	Schmidlapp, Jacob, New York, N. Y. Hook and ladder truck (Reissue)	Feb. 20, 1877	781	243	11	326
197,538	Schmidt, Friedrich E., Brooklyn, N. Y. Button-hole sewing-machine	Nov. 27, 1877	852	254	12	909
189,793	Schmidt, John G., Memphis, Tenn. Fan	Apr. 17, 1877	801	246	11	679
186,275	Schmidt, John L. G., Petersburg, Ill. Corn-planter	Jan. 16, 1877	457	140	11	85
192,940	Schmidt, Randolph, assignor to Otis, Brothers & Co., Yonkers, N. Y. Goods and passenger elevator	July 10, 1877	401	120	12	75
191,616	Schmitt, Martin, Evansville, Ind. Gutter-holder	June 5, 1877	97	30	11	989
190,377	Schmitt, Peter J., assignor of one-half interest to P. Fish, Chicago, Ill. Grate-bar for boiler-furnaces	May 1, 1877	257	76	11	780
187,420	Schmitthenner, Franciska P., Brooklyn, N. Y. Toy puzzle-block	Feb. 13, 1877	500	155	11	281
188,544	Schmitz, Florenze E., Middletown, N. Y. Book-binding	Mar. 20, 1877	590	183	11	475
188,193	Schmitz, John N., Kilbourn City, Wis. Horse-collar	Mar. 6, 1877	231	72	11	410
187,181	Schmitz, John P., San Francisco, Cal. Automatic sewer-trap	Feb. 6, 1877	246	81	11	236
189,794	Same. Station-indicator	Apr. 17, 1877	802	246	11	679
195,175	Same. Sewer-trap and flushing-gate	Sept. 11, 1877	437	130	12	469
	Schmitz, Michael. (*See* Wedesweiler, Jacob, assignor.)					
	Schmoele, Charles. (*See* Schmoele, William F. and H., jr., assignors.)					
	Schmoele, Henry, jr. (*See* Schmoele, William F. and H., jr.)					
189,391	Schmoele, William F. and H., jr., Philadelphia, Pa., assignor of one-third interest to C. Schmoele. Electro-pneumatic music-playing apparatus	Apr. 10, 1877	384	123	11	617
188,421	Schmolze, William, Pittsburg, Pa. Combined bridle and halter	Mar. 13, 1877	464	144	11	449
	Schneble, Martin. (*See* Wright & Schneble) (Reissue.)					
	Schneider, Bennett B. (*See* Brocke, Homer, assignor.)					
	Same. (*See* Dette, Wilhelm, assignor.)					
	Same. (*See* Fullagar, William) (Reissue.)					
	Same. (*See* Votti, Carl, assignor) (Reissue.)					
187,778	Schneider, Bennett B., New York, N. Y. Shade-holder	Feb. 27, 1877	881	274	11	347
	Schneider, Charles F. (*See* Christrup & Schneider.)					
193,463	Schneider, Charles H., Cold Spring, N. Y. Cigar-bunching machine	July 24, 1877	945	287	12	165
186,170	Schneider, Christian G., Washington, D. C. Metallic seal	Jan. 9, 1877	352	108	11	64
	Schneider, Gottlob E., *et al.* (*See* Josef, Philip P., assignor.)					
	Schneider, John. (*See* Scheibel, Seely & Schneider,)					
	Same. (*See* Scheibel, Henry, assignor.)					
	Schneider, Mary. (*See* Schell, Charles F., jr., assignor.)					
189,324	Schneider, Peter, sr., White Bear, Minn. Road-scraper	Apr. 10, 1877	327	103	11	609
	Schneider, Theodore C. (*See* Jellifli & Schneider.)					
196,169	Schneider, William E., United States Army. Station-indicator	Oct. 16, 1877	567	148	12	648
	Schnelke, William. (*See* Maas & Schnelke.)					
	Schnell, Lewis. (*See* Fellrath & Schnell.)					
196,483	Schneler, George O., Huntington, Conn. Water-meter	Oct. 23, 1877	835	241	12	702
191,375	Schnitt, Friedrich, Springfield, Ohio. Vegetable-slicer	May 29, 1877	1290	390	11	949
	Schnitzler, Albert, *et al.* (*See* Pollack, Joseph, assignor.)					
	Schoen, Charles. (*See* Wood, John W., assignor.)					
187,182	Schoenberg, Louis, San Francisco, Cal. Plumber's trap	Feb. 6, 1877	247	81	11	236
189,658	Schoepflin, John, Gardenville, N. Y. Cider and wine press	Apr. 17, 1877	662	205	11	661
193,620	Schofield, George W., United States Army. Revolving fire-arm	July 31, 1877	1123	337	12	199
187,917	Schofield, John S., Macon, Ga. Vertical portable engine	Feb. 27, 1877	1019	314	11	366
191,889	Schofield, Thomas, Grass Valley, Cal. Ore-stamp	June 12, 1877	368	113	11	1030
188,031	Scholey, William H. H., Chicago, Ill. Rail-joint	Mar. 6, 1877	73	21	11	390
187,468	Scholfield, Andrew H., assignor to E. M. Sterry, Worcester, Mass. Stove-grate	Feb. 20, 1877	584	181	11	360
	Scholfield, Socrates. (*See* Richards, Celius E., assignor)					
187,051	Scholfield, Socrates, Providence, R. I. Pocket-knife	Feb. 6, 1877	139	42	11	220
195,847	Scholl, John L., Burlington, Iowa. Trace-carrier for harness	Oct. 2, 1877	155	44	12	583
195,848	Same. Harness-saddle tree	Oct. 2, 1877	156	44	12	583
	Schollhorn, William. (*See* Blackman, Carlos W., assignor.)					
	Scholz, Charles. (*See* Kuhns, Scholz & Kuhns.)					
194,268	Scholz, Charles F., Dayton, Ohio. Grain-drill	Aug. 14, 1877	496	150	12	307
194,269	Schon, Heinrich M., Crimmitzchau, Saxony, Germany. Spinning-mule	Aug. 14, 1877	497	150 151	12	307
	Schonacker, John E. (*See* Herchelrode & Schonacker.)					
194,470	Schonacker, John E., Dayton, Ohio, assignor of one-half interest to E. W. Neff, Detroit, Mich. Fire-proof safe	Aug. 21, 1877	716	213	12	343
196,255	Schooley, John C., assignor to J. W. Curtis, New York, N. Y. Gas-regulator	Oct. 16, 1877	600	173	12	660
188,546	Schoonmaker, Daniel, Newark, N. J. Check-rein spread and attachment	Mar. 20, 1877	592	183	11	475
189,392	Schoonmaker, James W., Albany, N. Y. Lock for sliding doors, &c.	Apr. 10, 1877	388	124	11	617
190,910	Schott, George, and G. P. Heberling, Warsaw, Ill. Vent apparatus	May 15, 1877	820	242	11	869

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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193,738	Schrader, Rudolph, Indianapolis, Ind. Pitman-rod connection for steam-engines	July 31, 1877	1229	369	12	214
186,885	Schrag, Philip, New York, N. Y. Combined eraser and pencil	Jan. 30, 1877	1086	336	11	188
193,285	Schrag, Philip, assignor to E. Faber, New York, N. Y. Pen-holder	July 17, 1877	757	232	12	130
197,412	Same.....Lead-pencil	Nov. 20, 1877	716	214	12	881
188,964	Schrankel, John, Lancaster, N. Y. Pump	Mar. 27, 1877	1023	314	11	542
191,890	Schreiner, Henry, Philadelphia, Pa. Car-starter	June 12, 1877	370	113, 114	11	1030
	Schreiner, John H. (*See* Ellig, Henry, assignor.)					
	Same.....(*See* Huth, Henry, assignor.)					
197,567	Schrenkeisen, Martin, New York, N. Y. Chair	Nov. 27, 1877	893	266	12	915
196,835	Schreurs, Garrett W., Muscatine, Iowa. Mill-gearing	Nov. 6, 1877	98	30	12	774
190,519	Schrier, Charles A., Holyoke, Mass. Square	May 8, 1877	423	123	11	809
113,042	Schroder, Alfred, Omaha, Nebr. Breech-loading ordnance	July 4, 1877	500	150	12	88
7,496	Schroder, John, Kickapoo, assignor to H. H. Paltee, Monmouth, Ill. Cultivator. (Reissue)	Feb. 6, 1877	283	94	11	241
7,497	Same.....same	Feb. 6, 1877	290	94	11	241
192,458	Schroeder, Henry H., New Milford, Conn. Trace-fastener	June 26, 1877	790	298	11	1135
197,800	Schrom, Frank E., Whitewater, Wis. Sounding-machine	Dec. 4, 1877	95	29	12	959
	Schuch, Johann P. (*See* Schudt & Schuch.)					
191,721	Schudt, John, assignor to self and C. Seeger, New York, N. Y. Breech-loading fire-arm	June 5, 1877	196	62	11	1003
197,742	Schudt, John, and J. P. Schuch, New York, N. Y. Breech-loading fire-arms	Dec. 4, 1877	35	12	12	951
	Schuessler, Charles. (*See* Walters & Schuessler.)					
196,541	Schuldt, John N., Philadelphia, Pa. Horseshoe	Oct. 30, 1877	913	265	12	725
195,955	Schülgen, Hubert, New York, N. Y. Wire-fence stretcher	Oct. 9, 1877	278	78	12	608
	Schultz, Conrad. (*See* Lindfors & Schultz.)					
189,795	Schultz, Fridrich, Chicago, Ill. Vent attachment for beer-barrels	Apr. 17, 1877	803	247	11	679
191,376	Schultz, Joseph A., Batavia, N. Y. Brick-kiln	May 29, 1877	1291	391	11	949
194,471	Same.....Fire-escape	Aug. 21, 1877	717	214	12	344
194,472	Same.....Coloring photographs	Aug. 21, 1877	719		12	344
193,286	Schultz, Robert, Schoppenstedt, Germany. Ice-machine	July 17, 1877	758	232, 233	12	120
190,781	Schultze, H. Friedrich, Philadelphia, Pa. Cigar-cutter	May 15, 1877	704	208	11	853
7,948	Schulz, Friedrich W., assignor, by mesne assignments, to J. Stubs and C. H. Smith, Mount Pleasant, Iowa. Road-scraper	Nov. 13, 1877	498	147	12	839
186,959	Schulze, Charles G., New Orleans, La. Heat-regulator	Feb. 6, 1877	45	16	11	208
	Schulze, Paul. (*See* Krackowizer & Schulze.)					
198,693	Schumacher, Carl A., Walla Walla, Wash. Sewing-machine shuttle	Dec. 25, 1877	1013	308	12	1117
	Schumacher, Ferdinand. (*See* Ehrrichson, Asmus J., assignor.....(Reissue.)					
196,256	Schureman, Howard B., Newark, N. J. Combined window-catch and burglar-alarm	Oct. 16, 1877	601	173	12	661
196,045	Schuyler, George D., Lyons, assignor of one-half interest to H. D. Nutting, Parish, N. Y. Combined monument and tomb	Oct. 9, 1877	368	105	12	621
185,973	Schuyler, Isaac C., assignor to self and C. W. Ladd, Central City, Colo. Metal-punching machine	Jan. 2, 1877	159	49	11	29
	Schuyler, Isaac S. (*See* Moloney & Schuyler.)					
192,532	Schwab, Gabriel, New York, N. Y. Dress-train supporter	June 26, 1877	1069	322	11	1145
197,568	Schwaerzler, Martin, New York, N. Y. Permutation-lock	Nov. 27, 1877	893	266	12	915
197,673	Schwanengel, Charlys W., assignor of three-fourths interest to F. A. Requarth, H. Hassler, and C. W. Schaefer, Dayton, Ohio, Grocers' scoop	Nov. 27, 1877	995	297	12	930
187,421	Schwartz, Gustav, Budapesth, Austria, assignor of one-half interest to J. Thein, Buffalo, N. Y. Device for raising and leveling railway-tracks	Feb. 13, 1877	501	155	11	281
	Schwartz, John. (*See* McRavey & Schwartz.)					
189,504	Schwartz, John, Milo End, New Town, England. Clarifying sugar	Apr. 10, 1877	491		11	630
	Schwarz & Brother, Adolph. (*See* Girbardt, Leonhard, assignor.)					
186,276	Schwarz, August, New York, N. Y. Gas-retort cover	Jan. 16, 1877	458	141	11	85
197,413	Schwarz, Anton, New York, N. Y. Preparation of mash	Nov. 20, 1877	717	214	12	881
	Schwarz, Christian L., *et al.* (*See* Egloff, Bathis, assignor.)					
192,600	Schwatka, Frederick, United States Army. Army or hunting knife	July 3, 1877	115	32	12	27
190,520	Schwehr, Albert, Sandusky, Ohio. Hoe	May 8, 1877	423	124	11	809
192,601	Schweig, George M., assignor to L. Steinhardt, New York, N. Y. Electrode for electrical bath-tubs	July 3, 1877	45	13	12	18
185,974	Schweikert, John P., New York, N. Y. Wash-stand	Jan. 2, 1877	160	49	11	29
197,801	Schweinfurt, Augustus, Philadelphia, Pa. Spring-hinge	Dec. 4, 1877	96	29	12	959
193,781	Schwerdtfeger, Charles, Palmyra, Mo. Leaf-turner	July 31, 1877	1281	385	12	221
188,757	Schwerter, Augusta, New York, N. Y. Tool for opening jewels	Mar. 27, 1877	807	247	11	513
196,046	Schwippl, John, assignor to Strasburger, Pfeiffer & Co., New York, N. Y. Automatic toy	Oct. 9, 1877	369	105	12	621
196,391	Schwippl, John, Brooklyn, assignor to Strasburger, Pfeiffer & Co., New York, N. Y. Automatic toy	Oct. 23, 1877	748	215	12	691
198,692	Scofield, Charles, Vineland, N. J. Holder for matches, stamps, &c	Dec. 25, 1877	1012	308	12	1117
193,556	Scofield, Charles H., assignor of one-half interest to W. P. Fish, Utica, N. Y. Automatic gas-cock	July 24, 1877	1042	312	12	177
195,905	Same.....same	Oct. 9, 1877	224	63	12	601
188,963	Scofield, Ezra J. and M., Hartfield, N. Y. Jacketed butter-package	Mar. 27, 1877	1022	314	11	542
190,638	Scofield, James H., New York, N. Y. Egg-beater	May 8, 1877	532	158	11	824
188,547	Scofield, Levi, assignor of one-half interest to J. B. Wait, Grand Haven, Mich. Planter	Mar. 20, 1877	593	183	11	476
194,004	Same.....Corn-planter	Aug. 7, 1877	204	62	12	262
	Scofield, Marion. (*See* Scofield, Ezra J. and M.)					
196,940	Scofield, Orsamus K., Saint Joseph, Mo. Clasp for corsets	Nov. 6, 1877	213	62	12	789
187,986	Scollay, G. W., Saint Louis, Mo. Preparing and preserving meats	Mar. 6, 1877	30		11	384
197,903	Scotland, Andrew, and J. M. Simpson, Maltaville, N. Y. Apparatus for removing and collecting bugs from vines, &c	Dec. 4, 1877	196	59	12	974
	Scott & Brothers, T. Seymour. (*See* Scott, T. Seymour, assignor.)					
192,459	Scott, Albert M., and J. J. Roth, Edwardsville, Ill. Valve-gear	June 26, 1877	991	298	11	1136
	Scott, Charles, *et al.* (*See* Godley, George F., assignor).....(Reissue.)					
	Scott, Charles. (*See* Horner, Edwin J., assignor).....(Reissue.)					
	Scott, Edgar E., *et al.* (*See* Evans, George R., assignor.)					
186,886	Scott, Ethan A., San Francisco, Cal. Coin-wrapper	Jan. 30, 1877	1087	336	11	188
197,902	Scott, Henry C., Chicago, Ill. Lamp-wick	Dec. 4, 1877	195	59	12	974
	Scott, James. (*See* Squire, Daniel, assignor.)					
	Scott, John J. (*See* Watson & Scott.)					
198,050	Scott, John W., New York, N. Y. Sectional toy theatre	Dec. 11, 1877	344	107	12	1005
187,489	Scott, Nelson T., Hartford, Conn. Wash-bench	Feb. 20, 1877	585	181	11	300
	Scott, Robert P. (*See* Dewey & Scott.)					
193,187	Scott, Seth B., New York, N. Y. India-rubber stamp	July 17, 1877	646	196	12	116

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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188,075	Scott, T. Seymour, assignor to T. S. Scott & Brothers, Philadelphia, Pa. Paper carpet	Mar. 6, 1877	112		11	396
196,484	Scott, Walter, assignor of one-half interest to W. P. Nixon, Chicago, Ill. Paper-damping machine	Oct. 23, 1877	837	241	12	703
191,720	Scottron, Samuel R., New York, N. Y. Adjustable mirror for dressing-cases	June 5, 1877	195	62	11	1003
191,078	Scovell, Frank B., Waterford, Canada. Safety-valve	May 22, 1877	1003	299	11	901
188,032	Scovil, Lyman A., assignor to self and L. E. Scovil, Circleville, Ohio. Grain-binder	Mar. 6, 1877	74	21, 22	11	590
	Scovil, Lyman E. (*See* Scovil, Lyman A., assignor.)					
192,881	Scoville, Elijah U. and W. L., Manlius, N. Y. Metal pulley-block	July 10, 1877	350	103	12	67
193,289	Scoville, Hiram H., jr., Chicago, Ill. Stamp-mill	July 17, 1877	760	234	12	131
194,457	Same..... Stamp-mill mortar	Sept. 25, 1877	735	217	12	528
196,993	Scoville, Ives, Oakland, Cal. Sash-holder	Nov. 13, 1877	275	81	12	807
197,229	Scoville, Ives, and P. Bartlett, Oakland, Cal. Washing-machine	Nov. 20, 1877	534	158	12	853
	Scoville Manufacturing Company. (*See* Spruce, James, assignor.)					
	Scoville, Washington L. (*See* Scoville, Elijah U. and W. L.)					
190,911	Scowden, Leo A., San Francisco, Cal. Water-regulator	May 15, 1877	820	242	11	869
	Scranton, James P. (*See* Hersey, Alonzo, assignor.)					
196,543	Scriven, Oliver G., Langworthy, Iowa. Milking-stool	Oct. 30, 1877	915	265	12	725
191,551	Scrymgeour, David, Boston, assignor to W. T. Cook, Foxborough, Mass. Mold or die for forming articles of pulp	June 5, 1877	43	12	11	982
196,542	Same..... Machine for the manufacture of thick paper	Oct. 30, 1877	914	265	12	725
190,785	Scudder, Abram L., and J. L. Wager, Deposit, N. Y. Rotary steam-engine	May 15, 1877	705	208	11	854
	Scudder, Oscar F. (*See* Stewart, Frederick, assignor.)					
	Scull, Joseph W. (*See* Wood & Scull.)					
7,963	Scully, William, Detroit, Mich., assignor to Detroit Iron and Brass Manufacturing Company. Machine for grinding and polishing hollow ware (Reissue)	Nov. 27, 1877	1050	315	12	936
189,505	Scully, William, assignor to Detroit Iron and Brass Manufacturing Company, Detroit, Mich. Machine for grinding and polishing hollow ware	Apr. 10, 1877	492	155	11	630 631
193,557	Scutt, Hiram B., assignor to Joliet Wire Fence Company, Joliet, Ill. Wire-fence barb	June 24, 1877	1042	312	12	177
195,239	Scutt, Hiram B., Joliet, Ill. Barbed-wire fence	Sept. 18, 1877	517	151	12	488
	Seaberry, Chester B., *et al.* (*See* Morgan, Alfred F., assignor.)					
191,475	Seabury, Thomas S., New York, N. Y. Propulsion of vessels	May 29, 1877	1390	419	11	961
197,569	Seabury, Thomas S., Saint James, N. Y. Blowing-toy	Nov. 27, 1877	894	266	12	915
188,422	Seal, William B., Baltimore, Md. Shoe-brush	Mar. 13, 1877	464	144	11	449
197,414	Seal, William D., assignor to self and W. T. Nailer, Washington, D. C. Cock for air-compressors	Nov. 20, 1877	718	214	12	881
7,718	Sealy, Edward, Newark, N. J., assignor to P. A. Dailey, New York, N. Y. Felt fabric (Reissue)	May 29, 1877	1458	438	11	968
189,878	Seaman, John A., Chicago, Ill. Crozing and howeling machine	Apr. 24, 1877	907	277	11	700
189,580	Seaman, John H., Brooklyn, N. Y. Friction-clutch for gas-chandeliers	Apr. 17, 1877	587	182	11	652
195,406	Seaman, Joseph, Chicago, Ill. Plow	Sept. 18, 1877	671	198 199	12	511
192,460	Seaman, Joseph S., assignor of two-thirds interest to J. B. Young and R. Sleeth, Pittsburg, Pa. Machine for rounding and straightening rods	June 26, 1877	991	298	11	1136
197,179	Seaman, Thomas C., Chicago, Ill. Clamp for barrel-heads	Nov. 13, 1877	466	138	12	835
197,802	Seaman, William M., Bullitt's Bayou, La. Bale-tie	Dec. 4, 1877	97	29	12	950
	Searles, John E., jr., *et al.* (*See* Goodell, Abner C., assignor.)					
193,043	Searls, Ambrose M., Genesee, Ill. Pump	July 10, 1877	501	150 151	12	88
192,086	Sears, Edward H., assignor to Collins Company, Collinsville, Conn. Tool-handle	June 19, 1877	592	180	11	1072
188,965	Sears, Ephraim, Kimbolton, assignor to self and D. Dull, Wheeling, Ohio. Detachable shelf	Mar. 27, 1877	1023	314	11	542
194,112	Sears, Joseph, Chicago, Ill. Combined can and measure	Aug. 14, 1877	349	104	12	287
196,485	Same.....Can for packing meat	Oct. 23, 1877	838	241 242	12	703
191,722	Sears, William H., New Haven, Conn. Chimney-draft regulator	June 5, 1877	197	62	11	1003
198,220	Seaver, Augustus, Milford, Mass., assignor of one-half interest to C. D. Wood, Lincoln, R. I. Stay for seams of boots and shoes	Dec. 18, 1877	537	166	12	1039
	Seavey, Alvah H. (*See* Thomas, Phillip, assignor.)					
7,856	Seawell, Charles H., Saint Louis, Mo. Illuminating-signs (Reissue)	Aug. 21, 1877	759	225	12	349
189,796	Same..... Illuminating-sign	Apr. 17, 1877	803	247	11	679
198,500	Seawright, David, New Brighton, Pa. Lamp	Dec. 25, 1877	831	252	12	1090
189,271	Secor, Charles F., San Francisco, Cal. Composition-flux	Apr. 3, 1877	238	79	11	590
188,660	Secord, John E., assignor of one-third interest to J. H. Huyck, Port Sanilac, Mich. Rake for salt-boilers	Mar. 20, 1877	721	221	11	493
	Seddon, Edward. (*See* Powell & Seddon.)					
189,906	Sedgwick, Charles, New York, N. Y., assignor to H. W. Putnam, Bennington, Vt. Bottle-stopper	Apr. 24, 1877	934	285	11	704
196,486	Sedmihradsky, Adolph J., assignor of part interest to E. E. and J. C. Rogers, Milwaukee, Wis. Machine for sewing straw-braid	Oct. 23, 1877	840	242	12	703
195,407	See, Alonzo B., assignor of one-half interest to N. P. Otis, Yonkers, N. Y. Machine for opening envelopes	Sept. 18, 1877	673	199	12	511
195,661	See, Filer S., and G. G. Simonson, Prairie Home, Kans. Harrow	Sept. 25, 1877	928	277	12	556
194,182	Seeber, Horatio G., Brooklyn, N. Y. Belt grain-conveyer	Aug. 14, 1877	417	126	12	296
	Seeger, Charles. (*See* Schudt, John, assignor.)					
187,422	Seehausen, Herman, Memphis, Tenn. Curtain-fixture	Feb. 13, 1877	502	155	11	282
196,994	Seehausen, Herman, assignor of one-half interest to G. R. S. Jones, Memphis, Tenn. Curtain roller and bracket	Nov. 13, 1877	276	81	12	807
	Seeley, Daniel P. (*See* Miner & Seeley.)					
	Seeley, George M. (*See* Scheibel, Seeley & Schneider.)					
	Seeley, Nathan, *et al.* (*See* Judson & Schenck, assignors) (Reissue.)					
	Seely, Frederick L. (*See* Hinman & Seely.)					
186,761	Seelye, Norman M., Cambridge, Mass. Sand-paper roll and shank-wheel for soles of boots and shoes	Jan. 30, 1877	956	297	11	172
189,142	Seelye, William E., Anoka, Minn. Hand corn-planter	Apr. 3, 1877	111	40	11	574
189,797	Seerey, Edward F., Providence, R. I. Ornamental chain-link	Apr. 17, 1877	804	247	11	679
196,047	Seevers, Theodrick L., and J. Jelfs, Marshalltown, Iowa. Car-brake	Oct. 9, 1877	369	105	12	621
193,423	Segerdahl, Frans A., Karns City, Pa. Stirrup for oil-well machinery	July 24, 1877	910	276	12	159
193,160	Seibel, Phillip, jr., Saint Louis, Mo. Barrel-washer	Dec. 11, 1877	459	143	12	1021
198,469	Seiberling, John F. and M., Akron, Ohio. Machine for lining paper boards	Dec. 25, 1877	799	242	12	1086
	Seiberling, Monroe. (*See* Seiberling, John F. and M.)					
	Seidel, Reubeo B., *et al.* (*See* Cline, John C., assignor.)					
187,490	Seidler, George N., assignor of one-half interest to C. May, Hartford, Conn. Adjustable extension-chair	Feb. 20, 1877	586	181 182	11	300

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
197,982	Seifert, Oscar, and J. W. Manger, Newark, N. J. Combined spice box and grinder	Dec. 11, 1877	283	86	12	993
187,183	Seiler, Paul, assignor of one-half interest to J. Herz, San Francisco, Cal. Telegraphic insulator	Feb. 6, 1877	247	81	11	236
194,932	Same. Lock and electric burglar-alarm	Sept. 4, 1877	175	54	12	424
194,933	Same. Electro-magnetic alarm-bell	Sept. 4, 1877	177	55	12	424
	Seinecke, Adolph. (*See* Fricker & Seinecke.)					
188,194	Seitz, Leonard A., West Bellevue, Pa. Heater for fire-places	Mar. 6, 1877	232	72	11	410
196,598	Seitz, Philip, assignor to self and J. C. Holt, Baton Rouge, La. Sugar-cane harvester	Oct. 30, 1877	968	281	12	732
193,044	Seivert, Lawrence, J. Deitzen, and C. Stoetzel, Big River, Wis. Automatic wagon-brake	July 10, 1877	502	151	12	88
186,277	Seixas, Eugene E., Galveston, Tex. Weighted horseshoe	Jan. 16, 1877	458	141	11	85
	Selden & Griswold Manufacturing Company. (*See* Selden, Griswold & Crump, assignors.)					
	Selden, C. C. (*See* Miles & Robinson, assignors.)					
186,887	Selden, Charles, assignor to self and S. P. Peabody, Cincinnati, Ohio. Fire and police alarm-signal apparatus	Jan. 30, 1877	1088	337	11	188
	Selden, George. (*See* Clawson, J. Neal, assignor.)					
	Same. (*See* Tyler, Chandler & Standish assignors)	(Reissue.)				
186,762	Selden, George, and T. M. Nagle, Erie, Pa.; said Nagle assignor to said Selden. Boiler	Jan. 30, 1877	958	298	11	172
189,879	Selden, George, Erie, Pa., and J. M. Keeps, Jersey City, N. J.; said Keeps assignor to said Selden. Cigar-lighter	Apr. 24, 1877	909	278	11	701
7,799	Selden, George B., Rochester, N. Y. Machine for shaving half-round hoops	(Reissue) July 17, 1877	794	243	12	135
189,659	Same. Machine for splitting hoop-poles	Apr. 17, 1877	663	205	11	661
194,787	Selden, George S., and J. N. McLean, Philadelphia, Pa. Brick-machine	Sept. 4, 1877	33	11	12	405
188,418	Selden, Samuel, M. Griswold, jr., Erie, Pa., and J. S. Crump, Westfield, N. Y., assignors to Selden & Griswold Manufacturing Company, Erie, Pa. Stove-pipe damper	Mar. 13, 1877	461	143	11	449
190,983	Selden, Samuel, M. Griswold, jr., and O. R. Hanchett, Erie, Pa.; said Hanchett assignor to said Selden & Griswold. Stove-pipe thimble	May 22, 1877	919	272	11	889
191,476	Seligman, Henry, Irvington, N. Y. Deodorizing, disinfecting, and fertilizing compound	May 29, 1877	1391		11	961
195,051	Sell, James T., Cambridgeport, assignor of one-half interest to M. A. Lathrop, Boston, Mass. Sand-trap for artesian or driven wells, &c	Sept. 11, 1877	308	93	12	450
198,418	Selleg, David N., Newburg, N. Y. Folding-chair	Dec. 18, 1877	735	222	12	1068
185,975	Sellers, Coleman, assignor to W. Sellers, Philadelphia, Pa. Relief-valve for hydraulic machines	Jan. 2, 1877	161	49	11	29
	Sellers, Morris. (*See* Tilton, George W., assignor)	(Reissue.)				
	Sellers, William. (*See* Sellers, Coleman, assignor.)					
	Same. (*See* Knight, Ellis, assignor.)					
7,816	Sellers, William, Philadelphia, Pa. Injector for feeding boilers	(Reissue) July 24, 1877	1088	325	12	182
186,172	Same. Hydraulic-power regulator	Jan. 9, 1877	354	108	11	64
	Sellew, William, *et al.* (*See* Hoeltge, Frederick, assignor.)					
7,959	Sellman, Henry, Hoboken, N. J., H. Reesing and J. Wolff, New York, N. Y.; said Reesing and Wolff assignors to said Sellman. Compound for preserving fish.	(Reissue) Nov. 20, 1877	762		12	888
194,055	Sells, Hugh, Vienna, Canada. Hoisting-jack	Aug. 14, 1877	275	82	12	278
	Selph, Benammi. (*See* Robb & Selph.)					
189,758	Semman, John. (*See* Robb & Selph.)	Apr. 17, 1877	767	235	11	674
187,735	Semple, Robert W., assignor to G. A. Shaw, Toronto, Canada. Lock for sliding-doors	Feb. 27, 1877	838	261	11	342
194,731	Sendmeyer, Hermann, Philadelphia, Pa. Vegetable-cutter	Aug. 28, 1877	962	286	12	387
198,419	Senft, Fred., and U. Lorch, Philadelphia, Pa. Horseshoe	Dec. 18, 1877	736	223	12	1068
195,199	Sergeant, Henry C., New York, N. Y. Brick-machine	Sept. 11, 1877	458	137	12	473
7,980	Sergeant, Wells E., Minneapolis, Minn. Millstone-driver	(Reissue) Dec. 4, 1877	223	68	12	978
	Serrell, Lemuel W., trustee, *et al.* (*See* Strong, Myron H., assignor.)					
	Serviss, W. M. (*See* Serviss, William, assignor.)					
188,681	Serviss, William assignor to W. M. Serviss, Sidney, Ohio. Wash-board	Mar. 20, 1877	722	221	11	493
196,048	Sessions, Francis E., Worcester, Mass. Plow	Oct. 9, 1877	371	105	12	621
194,473	Setchell, George C., and W. W. Higgins, Norwich, Conn. Chain fastening-latch	Aug. 21, 1877	720	214	12	344
	Settles, Frank, *et al.* (*See* Kundergraber, Charles, assignor.)					
196,312	Severance, Asa F., Northborough, Me. Reed organ	Oct. 23, 1877	671	194	12	679
191,477	Severance, William N., South Bend, Ind. Machine for cutting nails	May 29, 1877	1391	420	11	962
189,393	Sevey, Hiram B., Vienna, Me. Blacksmiths' anvil	Apr. 10, 1877	390	124	11	617
	Sewall, Samuel, jr., *et al.* (*See* Braddock, Edward I., assignor.)					
190,629	Seward, Moses, New Haven, Conn. Device for shaping clip-yokes	May 8, 1877	532	158	11	824
197,983	Same. Carriage foot-rest	Dec. 11, 1877	284		12	995
198,051	Same. Stay-end clip	Dec. 11, 1877	345		12	1005
	Sexton, Daniel. (*See* Palen & Sexton.)					
187,052	Seybold, Frederick J., Chicago, Ill., assignor of one-half interest to J. D. Vanderford, Saint Louis, Mo. Gage	Feb. 6, 1877	130	43	11	220
194,458	Seybold, Frederick J., Chicago, Ill. Bottle-stopper fastener	Sept. 25, 1877	736	217	12	528
194,788	Same. same	Sept. 4, 1877	35	11	12	405
195,849	Same. Bottle-stopper, &c	Oct. 2, 1877	157	44	12	583
198,221	Same. Stopper-fastener	Dec. 18, 1877	537	167	12	1039
190,912	Seyl, Peter, assignor of one-half interest to J. C. Hains, Chicago, Ill. Fare-regulator.	May 15, 1877	821	242	11	869
	Seyler, Andrew J. (*See* Reel & Seyler)	(Reissue.)				
192,392	Seymour, Alfred B., Portsmouth, assignor to J. W. Chestnut, Pomeroy, Ohio. Sectional roll	June 26, 1877	935	280	11	1128
192,021	Seymour, Alfred B., assignor to I. M. Seymour, Portsmouth, Ohio. Water-closet	June 12, 1877	502	154	11	1047
189,506	Seymour, Charles, Defiance, Ohio. Device for balancing fly-wheels, &c	Apr. 10, 1877	493	155	11	631
	Seymour, Henry A., jr. (*See* Pond, Henry A., assignor.)					
192,533	Seymour, Frederick H., Detroit, Mich. Door and drawer plate	June 26, 1877	1069	322	11	1145
7,758	Seymour, Frederick J., Wolcottville, Conn., assignor to self and Phelps, Dodge & Co. Floor-protector for stoves	(Reissue) June 19, 1877	856	259	11	1102
186,063	Seymour, Frederick J., Wolcottville, Conn. Floor-protector for stoves	Jan. 9, 1877	253	76	11	51
	Seymour, Ida M. (*See* Seymour, Alfred B., assignor.)					
197,180	Seymour, Norman A., and O. Allen, Mount Morris, N. Y. Thill-coupling	Nov. 13, 1877	466	138	12	835
197,294	Seymour, Samuel B., Mount Morris, N. Y. Ladder	Nov. 20, 1877	596	177	12	862
188,682	Seys, Cornelius D., Springfield, assignor to W. M. and T. Dunham, Cleveland, Ohio, and J. S. Kendrick, Benton Harbor, Mich. Bucket-bail ear	Mar. 20, 1877	723	222	11	493
197,295	Shadman, William R., Williamsport, Pa. Log-carrier	Nov. 20, 1877	596	177	12	863
195,540	Shaeffer, John W., San Francisco, Cal. Packing cigars	Sept. 25, 1877	813	241	12	539
198,694	Shaffer, Abraham, Colo, Iowa. Fence-post	Dec. 25, 1877	1014	308	12	1117
192,022	Shaller, John, New York, N. Y. Step for velocipedes	June 12, 1877	503	154	11	1047
	Shallon, James. (*See* Thornton & Shallon.)					
189,961	Shankland, Samuel P., Laramie, Wyo. Steam plowing and scraping attachment to cars	Apr. 24, 1877	984	301	11	771

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
196,836	Shankland, Samuel S., Laramie, Wyo. Steam plowing and scraping attachment to cars.	Nov. 6, 1877	98	30	12	775
197,230	Shanks, Robert L., Greenwich, N. Y. Jewelry pin and hook	Nov. 20, 1877	535	158	12	853
196,544	Shanks, Walter M., Allegheny, Pa. Grate	Oct. 30, 1877	915	265	12	725
	Shannon, Thomas. (*See* Overshiner & Shannon.)					
	Shantz, Enos S. (*See* Keeley & Fleming, assignors.)					
188,966	Shantz, Enos S., Philadelphia, assignor to self and O. B. Keeley, Spring City, Pa. Cooking-stove	Mar. 27, 1877	1024	315	11	543
192,534	Sharp, Henry C. and W. T., Stanton County, Nebr. Corn-marker	June 26, 1877	1070	322	11	1145
	Sharp, James B. (*See* Fischer, Kets & Sharp.)					
192,535	Sharp, James B., New York N. Y. Suspenders	June 26, 1877	1070	322	11	1145
	Sharp, James L. (*See* Pennie, Henry, assignor.)					
197,743	Sharp, John, Carbon Center, Pa. Pitman-head for oil-wells	Dec. 4, 1877	36	12	12	951
189,507	Sharp, John H., Doylestown, Pa. Concave for thrashing-machines	Apr. 10, 1877	494	156	11	631
190,693	Sharp, Joseph, Cincinnati, Ohio. Machinery for stretching leather	May 15, 1877	617	183	11	842
186,693	Sharp, Lewis R., New York, N Y. Combined under-shirt and drawers	Jan. 30, 1877	897	277	11	163
192,942	Sharp, Wiley G. P., Wartrace, Tenn. Harrow	July 10, 1877	403	121	12	76
187,918	Sharp, William C., Boston, Mass. Curtain-fixture	Feb. 27, 1877	1020	315	11	366
	Sharp, William T. (*See* Sharp, Henry C. and W. T.)					
	Sharpe, Lucian, executor. (*See* Brown, Joseph R.)					
198,222	Sharpless, Charles W., Philadelphia, Pa. Producing a water or oil proof colored outer surface upon paper, &c	Dec. 18, 1877	539		12	1039
	Sharpneck, William S. (*See* Penn & Sharpneck.)					
	Sharrer, David, *et al.* (*See* Cornell, George W., assignor.)					
187,736	Shattuck, Charles H., Boston, Mass. Casing for car-windows	Feb. 27, 1877	839	261	11	342
188,423	Shattuck, Charles H., assignor of two-thirds interest to J. E. Rugg, Boston, Mass., and G. Sawyer, Philadelphia, Pa. Car axle box	Mar. 13, 1877	465	144	11	449
190,084	Shaut, James H., Hornellsville, N. Y. Oil-burning stove	Apr. 24, 1877	1123	341	11	729
190,914	Share, Levi, and S. Y. Reams, Austin County, Tex. Handsaw	May 15, 1877	824	243	11	869
192,461	Shaver, George F., Moorheadville, Pa. Sled-propeller	June 26, 1877	992	299	11	1136
195,956	Shaver, George F., Moorheadville, Pa., assignor to self and M. D. Tennant, Westfield, N. Y. Mail-bag catch	Oct. 9, 1877	278	78	12	608
189,660	Shaw, Ai B., Medford, Mass. Curtain-fixture	Apr. 17, 1877	665	206	11	661
189,798	Shaw, Ai B., Medford, assignor to H. B. Russell, D. Low, and J. F. Almy, Salem, Mass. Curtain-fixture	Apr. 17, 1877	804	247	11	679
194,056	Shaw, Ai B., Medford, assignor to M. W. Carr, Somerville, and H. W. Brooks, Cambridge, Mass. Attaching door-knobs to spindles	Aug. 14, 1877	276	82	12	279
195,729	Shaw, Ai B., Medford, Mass. Curtain-roller and bracket	Oct. 2, 1877	40	12	12	566
198,315	Shaw, George and T., Dukinfield, Great Britain. Machine for polishing vegetable fiber, &c	Dec. 18, 1877	634	193	12	1053
	Shaw, George A. (*See* Semple, Robert W., assignor.)					
	Shaw, George G. (*See* Palmer, James M., assignor.)					
	Shaw, George W., *et al.* (*See* Wardwell, Simon W., jr., assignor.)					
	Shaw, Ira C. (*See* Roberts, William S., assignor.)					
195,408	Shaw, John, Oil City, Pa. Joint for sucker-rods	Sept. 18, 1877	674	199	12	511
	Shaw, John E. (*See* Hershey, Benjamin, assignor.)					
194,378	Shaw, John M., Shaw's Mills, Ga. Circular-sawing machine	Aug. 21, 1877	617	186	12	331
7,509	Shaw, Melvin, Abington, Mass., assignor, by mesne assignments, to B. F. Brown, trustee. Composition for dressing leather (Reissue)	Feb. 13, 1877	543	186	11	286
190,913	Shaw, Nathan Y., Freehold, N. Y. Whiffletree-hook	May 15, 1877	823	243	11	869
187,323	Shaw, Noah, and D. Kennedy, Eau Claire, Wis. Machine for making laths	Feb. 13, 1877	407	128, 129	11	270
194,620	Shaw, Salmon, Springville, N. Y. Shoe-brush	Aug. 28, 1877	860	256	12	373
	Shaw, Thomas. (*See* Hover, Joseph E., assignor.)					
	Same (*See* Shaw, George and T.)					
7,475	Shaw, Thomas, assignor, by mesne assignments, to P. S. Justice, Philadelphia, Pa. Power-hammer (Reissue)	Jan. 23, 1877	860	265	11	149
187,053	Shaw, Thomas, Philadelphia, Pa. Pressure-gage	Feb. 6, 1877	130	43	11	220
187,780	Same Exhaust-nozzle	Feb. 27, 1877	882	275	11	348
190,378	Same Relieving high-pressure engines	May 1, 1877	257	77	11	780
193,558	Same Safety-valve	July 24, 1877	1043	312	12	177
194,732	Same Spark-arrester	Aug. 28, 1877	964	286	12	387
194,847	Same Oil-tank	Sept. 4, 1877	89	29	12	413
7,632	Shaw, Thomas L., Omaha, Nebr. Saw filer and setter (Reissue)	Apr. 24, 1877	1168	354	11	735
	Shaw, Vincent & Co. (*See* Fox, James A., assignor.)					
197,415	Shaw, Walter L., Fayette County, Pa. Pruning-hook	Nov. 20, 1877	719	214	12	881
192,463	Shaw, William, assignor to self, B. L. and F. L. Honoré, Chicago, Ill. Earth-auger	June 26, 1877	994	299	11	1136
	Shawmut Manufacturing Company. (*See* Harrington, John, assignor) (Reissue.)					
195,541	Shear, Henry, assignor to self and E. Cornthwait, Arcola, Ill. Combined crank and treadle power for driving saws and other light machinery	Sept. 25, 1877	813	241	12	539
	Shedd, John M., *et al.* (*See* Bartlett, Francis C., assignor.)					
	Shedlock, Alfred. (*See* Griffith, Byrne & Shedlock.)					
192,702	Shedlock, Alfred, assignor to A. Gago, New York, N. Y. Register	July 3, 1877	236	69	12	44
193,385	Shedlock, Alfred, assignor of one-half interest to J. Frazer and W. M. Reynolds, New York, N. Y. Electro-magnetic motor	July 24, 1877	872	267	12	154
189,272	Sheehy, Robert J., Boston, Mass. Dial-telegraph	Apr. 3, 1877	238	79, 80	11	590
191,478	Same Electro-magnetic motor	May 29, 1877	1395	442	11	962
191,479	Same Printing-telegraph	May 29, 1877	1396	420, 421	11	962
194,474	Sheets, William P., Princeton, Mo. Fire-escape	Aug. 21, 1877	720	214	12	344
187,054	Sheffer, John H., Cairo, Ky. Reciprocating-churn	Feb. 6, 1877	131	43	11	220
188,976	Sheffield, George P., Ontario, N. Y. Horseshoe	Mar. 27, 1877	1024	315	11	543
195,662	Shelby, Christopher C., Jersey City, N. J. Stocking-supporter	Sept. 25, 1877	929	277	12	556
193,621	Shelby, Mary A., Moscow, Ky. Stove	July 31, 1877	1124	337	12	199
195,957	Shelby, Peter P., Omaha, Nebr. Railway ferry-car	Oct. 9, 1877	279	79	12	608
197,984	Sheldon, Frank P., Providence, R. I. Holder for screw-cutting dies	Dec. 11, 1877	284	87	12	995
	Sheldon, George T. (*See* Pierce, Lewis, assignor.)					
189,661	Sheldon, Jeremiah A., Providence, R. I. Screw-threading machine	Apr. 17, 1877	665	206	11	661
189,962	Sheldon, John P., and O. F. Graves, San Francisco, Cal. Drawing broken piles out of the ground	Apr. 24, 1877	985	301	11	711
	Sheldon, John S. (*See* Young & Sheldon)					
196,599	Sheldon, Sylvester W., New York, N. Y. Broom-rack	Oct. 30, 1877	969	281	12	732
195,310	Sheldon, Sylvester W., and D. Dunscomb, New York, N. Y. Transferable barrel-cover	Sept. 18, 1877	584	171	12	498
	Sheldrake & Co., S. (*See* Baldwin, Augustine, assignor)					

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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190,087	Shellabarger, Flavious W., Miami County, Ohio. Corn-planter	Apr. 24, 1877	1126	342, 343	11	729
190,088	Shellenback, Peter, assignor to J. A. Morris and W. E. Drayer, Hamilton, Ohio. Combination-lock	Apr. 24, 1877	1129	343	11	729
188,821	Shelly, Jacob S., Shannon, Ill. Horse-power	Mar. 27, 1877	884	268	11	523
7,498	Shelton, John H., Waterbury, Conn., assignor to Benedict & Burnham Manufacturing Company. Furniture-knob (Reissue)	Feb. 6, 1877	290	94	11	241
189,394	Shenfield, Abraham, New York, N. Y. Suspenders	Apr. 10, 1877	391	124	11	617, 618
191,184	Same same	May 22, 1877	1103	329	11	915
191,185	Same same	May 22, 1877	1104	330	11	915
197,058	Shepard, Abel G., Malvern, Iowa. Tire-tightener	Nov. 13, 1877	341	101	12	817
186,889	Shepard, Amos, Southington, Conn. Coffee-mill	Jan. 30, 1877	1090	337	11	188, 189
191,079	Shepard, Edwin R., Philadelphia, Pa. Nut-lock	May 22, 1877	1004	299	11	901
196,489	Shepard, George L., New York, N. Y. Regulator for gas-burners	Oct. 23, 1877	843	243	12	703
	Shepard, Henry W. (*See* Graves, John, assignor.)					
7,987	Shepard, James, New Britain, and B. B. Lewis, Bristol, Conn., assignors, by mesne assignments, to J. Shepard. Fruit-box (Reissue)	Dec. 11, 1877	482	151	12	1024
188,968	Shepard, James, Angola, Ind. Wrench	Mar. 27, 1877	1025	315	11	543
	Shepard, John. (*See* St. John Robinson & Shepard.)					
194,733	Shepard, John, Carmi, Ill. Carbureter	Aug. 28, 1877	965	286	12	387
186,041	Shepard, Morrill A., Lebanon, Ill. Sheet-metal roof	Jan. 9, 1877	212	64	11	45
193,099	Shepherd, Charles C., Passaic, N. J. Drawing-slate	July 17, 1877	573	173	12	105
193,464	Same School-slate	July 24, 1877	946	287	12	165
198,552	Same Slate	Dec. 25, 1877	875	267	12	1097
	Shepherd, Samuel, *et al.* (*See* Harris, Samuel, jr., assignor.)					
195,850	Shepherd, Sarah A., Washington, D. C. Mattress	Oct. 2, 1877	159	44	12	583
195,958	Shepler, James M. F., Lyon's Station, Ind. Grain-separator	Oct. 9, 1877	282	79	12	608
7,546	Sheppard, John L., Charleston, S. C., assignor, by mesne assignments, of one-half interest to M. H. G. Sheppard. Cotton-bale tie (Reissue)	Mar. 6, 1877	261	81	11	414
187,184	Sheppard, John L., Charleston, S. C. Bale tie	Feb. 6, 1877	248	81	11	236
188,195	Same Bale-band tightener	Mar. 6, 1877	233	73	11	411
189,325	Same same	Apr. 10, 1877	327	104	11	609
	Sheppard, Margaret H. G. (*See* Sheppard, John L., assignor) (Reissue)					
187,055	Sherar, William W., Rochester, N. Y. Electro-magnetic attachment for time-locks	Feb. 6, 1877	131	43	11	220, 221
191,553	Sherburne, Norman H., Chicago, and E. S. Skinner, Lake Forest, Ill. Cooking attachment to coal-oil stoves	June 5, 1877	44	13	11	982
186,888	Sherer, William T., Chicago, Ill. Grocer's scoop	Jan. 30, 1877	1089	337	11	188
189,508	Same Show-case	Apr. 10, 1877	494	156	11	633
190,089	Sheridan, Edwin R. and T. W., Brooklyn, N. Y. Machine for cutting paper	Apr. 24, 1877	1130	343, 344	11	730
	Sheridan, James. (*See* Koerber & Sheridan.)					
	Sheridan, Theodore W. (*See* Sheridan, Edwin R. and T. W.)					
186,763	Sherman, Albert R., Natick, R. I. Gate-operating mechanism	Jan. 30, 1877	959	298	11	172
191,617	Sherman, Daniel H., Urbana, Ohio. Type-writer	June 5, 1877	98	31	11	989
191,552	Sherman, Evrett S., Galena, Ohio. Bridge	June 5, 1877	43	13	11	982
193,898	Sherman, Homer, Flushing, Mich. Combined divider and siding-hook	Aug. 7, 1877	96	31	12	248
188,307	Sherman, Jacob A., New York, N. Y. Truss	Mar. 13, 1877	348	109	11	433
188,308	Same Combined latch and bolt	Mar. 13, 1877	348	110	11	433
	Sherman, James O. (*See* Spooner, Charles F., assignor.)					
188,076	Sherman, J. Edwin, Boston, Mass. Process and compound for refining iron	Mar. 6, 1877	113		11	396
188,077	Same Compound and process for refining iron	Mar. 6, 1877	113		11	396
188,078	Same Compound and process for refining iron and steel	Mar. 6, 1877	114		11	396
	Sherman, Jeremiah G. (*See* Sherman, Samuel S. and J. G.					
	Sherman, John D. (*See* Brennand & Hampson, assignors.)					
192,602	Sherman, Lewis P., assignor of one-half interest to P. M. Berry, Biddeford, Me. Door-spring	July 3, 1877	46	13	12	18
192,536	Sherman, Samuel S. and J. G., McHenry, Ill. Farm-gate	June 26, 1877	1072	323	11	1146
194,270	Sherman, Seeley M., Fort Dodge, Iowa. Blind-slat operator	Aug. 14, 1877	498	151	12	307
196,487	Sherman, William F., Lowell, Mass. Vessel for holding liquids	Oct. 23, 1877	842	242	12	703
189,306	Sherriff, James A., Franklin, Pa. Lightning-rod for oil-tanks	Apr. 0, 1877	329	105	11	609
193,350	Sherriff, William J., Pittsburg, Pa. Deep-well check-valve	July 24, 1877	808	257	12	150
192,462	Sherrill, James, Harrisburg, Oreg. Cultivator	June 26, 1877	993	299	11	1136
193,559	Sherrill, Nathaniel H., Le Roy, N. Y. Gate-hanger	July 24, 1877	1014	312	12	177
189,063	Sherwin, George, and E. Hoople, Brooklyn, N. Y. Center-lamp	Apr. 3, 1877	48	17, 18	11	565
189,064	Same Bracket-lamp	Apr. 3, 1877	49	18, 19	11	566
189,065	Same Center-lamp	Apr. 3, 1877	51	19	11	566
194,564	Sherwin, Henry A., Cleveland, Ohio. Packing or shipping can	Aug. 28, 1877	812	242	12	366
192,087	Sherwood, Daniel, Lowell, Mass., assignor to F. Dietz, New York, N. Y. Lantern	June 19, 1877	592	180	11	1072
194,005	Sherwood, Emmett A., Syracuse, N. Y. Machinery for feeding and attaching buttons.	Aug. 7, 1877	205	62	12	262
	Sherwood, John B. (*See* Dolsen & Sherwood.)					
187,324	Sherwood, Obadiah, jr., Richford, Vt., assignor of three-fourths interest to G. W. Kendall, P. Huddy, and A. D. Cable, Montreal, Canada; said Cable assignor to said Sherwood. Extension-ladder	Feb. 13, 1877	411	129	11	270
190,085	Sherwood, Obadiah, jr., Sutton Flats, Canada. Fire-escape	Apr. 24, 1877	1124	342	11	729
190,086	Same Step-ladder	Apr. 24, 1877	1125	342	11	729
192,943	Sherwood, Willis H., Saint Joseph, Mo. Coffee-pot	July 10, 1877	404	121	12	76
	Shidel, Andrew. (*See* Baum & Shidel.)					
188,424	Shields, David, Florence, Mass. Oil-stove	Mar. 13, 1877	465	145	11	449
	Shields, J. M., *et al.* (*See* Green, William W., assignor.)					
196,600	Shiland, Alexander, West Troy, N. Y. Speculum	Oct. 30, 1877	970	281	12	733
	Shill, Harry J. jr. (*See* Barker & Shill.)					
191,377	Shilling, Jacob, Cedar Spring, Pa. Grain-separator	May 29, 1877	1292	391	11	949
	Shillington, Thomas F. (*See* Musgrave, Shillington & Hanna.)					
187,056	Shine, Joseph A., Mount Olive, N. C. Cotton-planter and fertilizer-distributer	Feb. 6, 1877	133	44	11	221
194,006	Shingleton, George W., Indianapolis, Ind. Watchman's time-detecter	Aug. 7, 1877	209	62	12	262
193,782	Shinn, John, Philadelphia, Pa. Harness-motion for looms	July 31, 1877	1283	385, 386	12	221
193,783	Same Shuttle-box motion for looms	July 31, 1877	1285	386	12	221
	Shinn, Thornton A. (*See* Miller, Thomas D., assignor.)					
197,674	Shipe, John L., Clinton, Tenn. Churn	Nov. 27, 1877	995	297	12	930

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
192,023	Shipherd, William C., assignor of two-thirds interest to J. J. Brooks and S. K. Davis, Cleveland, Ohio. Journal	June 12, 1877	504	154	11	1047
192,944	Shiras, David R., Sharon, Pa. Cooling apparatus for stand-pipes of gas-retorts	July 10, 1877	405	121	12	76
7,988	Shireman, Joseph H., York, Pa., assignor to J. E. Wisner, Friendship, N. Y. Horse hay-rake (Reissue)	Dec. 11, 1877	483	151	12	1024
	Shirley, David D. (*See* Prather & Shirley)					
	Shirley, Frederick S. (*See* Crosby, Robert R., assignor) (Reissue.)					
187,423	Shirley, Frederich S., New Bedford, Mass. Lamp shade and globe	Feb. 13, 1877	502	156	11	282
189,509	Same. Chandelier	Apr. 10, 1877	495	156	11	631
189,799	Same. Shade-holder and gas-burner	Apr. 17, 1877	605	248	11	679
195,052	Shishmanian, George N., Galveston, Tex. Fire-escape	Sept. 11, 1877	309	94	12	450
194,271	Shiver, Elisha, assignor to J. Lockey, Washington, D. C. Shot-machine	Aug. 14, 1877	500	151	12	308
190,379	Shivler, Charles S., New York, N. Y. Electro-magnetic railway-signal	May 1, 1877	258	77	11	780
197,416	Shivler, Charles S., assignor of one-half interest to G. W. Tompkins, New York, N. Y. Electro-magnetic burglar-alarm for safes	Nov. 20, 1877	720	215	12	882
198,695	Shockley, David W., Wilmington, Del. Car-couplings	Dec. 25, 1877	1014	309	12	1117
192,717	Shockley, William, Alberton, Iowa. Show-case	July 3, 1877	162	46	12	35
198,052	Shoe, William W., Philadelphia, Pa. Screw-propeller	Dec. 11, 1877	345	108	12	1006
198,053	Same. Steering-propeller	Dec. 11, 1877	346	108	12	1006
197,231	Shoemaker, Alexander D., Spring Church, Pa. Combined corn-planter and fertilizer-distributer	Nov. 20, 1877	536	158, 159	12	853
194,379	Shoenfeld, Louis, Eufaula, Ala. Condition powder for horses and cattle	Aug. 21, 1877	618		12	331
197,417	Shoeninger, Adolph, Chicago, Ill. Ferrule for tool-handles	Nov. 20, 1877	723	215	12	882
186,439	Shogren, Andrew, Sandwich, Ill. Machine for making machinery-keys	Jan. 23, 1877	651	199, 200	11	121
187,057	Shogren, Andrew, assignor to H. A. and J. P. Adams, Sandwich, Ill. Harvester-reel	Feb. 6, 1877	134	44	11	221
196,770	Shogren, Hans, Portland, Oreg. Treadle	Nov. 6, 1877	33	10	12	765
192,061	Sholder, Louis H., Cleveland, Ohio. Hasp-lock	July 3, 1877	116	32	12	28
191,816	Sholes, Frederick, assignor to D. M. Somers, New York, N. Y. Pencil	June 12, 1877	300	93	11	1021
196,049	Sholes, Frederick, New York, N. Y. Mucilage-bottle	Oct. 9, 1877	372	106	12	621
	Sholes, Marion. (*See* Morse & Sholes.)					
192,194	Shook, Levi, assignor of one-half interest to J. Rees, Pittsburg, Pa. Precipitator for steam-engine boilers	June 19, 1877	700	214	11	1085
194,475	Shook, Levi, assignor to self and Patterson & Bishop, Pittsburg, Pa. Indicator for steamboat-engines	Aug. 21, 1877	721	214	12	344
194,476	Same. Indicator for steering apparatus	Aug. 21, 1877	722	215	12	344
	Shoop, Charles. (*See* Poh & Shoop.)					
192,793	Shoots, James D., assignor of one-half interest to S. H. Conkling, Horseheads, and C. E. Vinton, Elmira, N. Y. Wood-boring machine	July 3, 1877	237	69	12	44
	Shotwell, Jabez E. (*See* Butler, Jeremiah C., assignor.)					
	Shoup, Azel D. (*See* Burger & Shoup.)					
190,380	Shoup, Daniel, Warsaw, Ind. Car-starter	May 1, 1877	262	77	11	780
192,464	Shosey, Frank P., Auburn, N. Y. Car-coupling	June 26, 1877	995	299	11	1136
187,325	Shorey, Samuel W., Boston, Mass. Button	Feb. 13, 1877	411	129	11	270
	Shorno, Andrew D. (*See* Smith & Shorno.)					
186,371	Short, Andrew J., Typsum, N. Y. Muzzle-bit for horses	Jan. 16, 1877	568	172	11	98
190,786	Short, James, East New Brunswick, N. J. Finishing woven fabrics	May 15, 1877	706	209	11	854
	Short, John. (*See* Lovelace, Stephen P., assignor.)					
188,263	Shreffler, Andrew H., Joliet, Ill. Corn-shelling machine	Mar. 13, 1877	303	96	11	427
7,765	Shriver, Aaron J., assignor to S. M. Shriver, Baltimore, Md. Restoring crape, laces, &c (Reissue)	June 26, 1877	1095		11	1149
193,188	Shriver, Frederick, Grand Rapids, Mich. Hydrant-valve	July 17, 1877	646	196	12	116
	Shriver, Sarah M. (*See* Shriver, Aaron J., assignor) (Reissue.)					
	Shryock, George S. (*See* Turbeville, Ewing C., assignor.)					
198,224	Shuck, Andrew J., Jennings County, and B. F. Wildman, Ripley County, Ind. Hay and cotton press	Dec. 18, 1877	542	167	12	1039
198,223	Shuck, John M., Des Moines, Iowa. Bee-hive	Dec. 18, 1877	540	167	12	1039
	Shull, Thomas. (*See* Lancaster & Shull.)					
187,492	Shultz, John A. J., Saint Louis, Mo. Manufacturing fulled rawhide	Feb. 20, 1877	587		11	300
187,920	Shuman, Charles, Red Oak, Iowa. Neck-yoke ring	Feb. 27, 1877	1023	315	11	366
193,560	Shuman, Thomas, Corning, Iowa. Stove-pipe thimble	July 24, 1877	1045	313	12	177
	Shumard, Isaac T. (*See* Baldwin & Shumard.)					
	Shumard, William K. (*See* Baldwin & Shumard.)					
187,491	Shunk, Alexander J., Des Moines, Iowa. Fruit-gatherer	Feb. 20, 1877	587	182	11	300
188,822	Shunk, Christian, assignor of one-half interest to A. Boyd, Philadelphia, Pa. Casting ingots of steel	Mar. 27, 1877	885	269	11	523
187,919	Shupe, Isaac, New Market, Canada. Harrow	Feb. 27, 1877	1022	315	11	366
185,976	Shur, Milton M., Denver, Colo. Button-lock and fastener	Jan. 2, 1877	162	50	11	30
188,196	Shurtleff, William S., Springfield, Mass. Table	Mar. 6, 1877	234	73	11	411
	Shurtleff, William T., *et al* (*See* Griffith, Samuel R., assignor.)					
	Shurtleff, William T. (*See* Dodge, John R., jr., assignor)					
193,351	Shurtz, John G., assignor of two-thirds interest to P. C. Hoffman and J. P. Dickey, Chicago, Ill. Bag-holder and filler	July 24, 1877	839	257	12	150
196,941	Shute, Charles S., Springfield, Mass. Adjustable stilt	Nov. 6, 1877	213	63	12	720
	Shutter, S. E. (*See* Webb, Ezra, assignor.)					
	Sibley, Edwin E. (*See* Callahan, Cornelius, assignor.)					
186,764	Sibley, E. Ripley, Saint Louis, Mo. Apparatus for drawing still waters	Jan. 30, 1877	960	298	11	172
193,045	Sibley, Frank, J. Holmwood, jr., and H. Luckenbach; said Luckenbach assignor to said Sibley and Holmwood, Buffalo, N. Y. Confectionery composition	July 10, 1877	503		12	89
191,186	Sibson, Joseph, Philadelphia, Pa. Knitting-machine	May 22, 1877	1104	330	11	915
	Sickels, David W. (*See* Witherell, Loren R., assignor) (Reissue.)					
188,425	Sickels, Frederick E., Philadelphia, Pa. Power and hand windlass combined	Mar. 13, 1877	468	145	11	449
196,709	Sickels, Frederick E., New York, N. Y. Steam-steering apparatus for vessels	Oct. 30, 1877	1074	312	12	747
	Sickels, William. (*See* Johnston, James G., assignor.)					
198,696	Sickler, Jacob W., Tompkinsville, Pa. Basket	Dec. 25, 1877	1015	309	12	1117
197,529	Siddall, William, Pioneer, Ohio. Ballot-box	Nov. 27, 1877	854	254	12	910
194,734	Sidebotham, John, Blackpool, England. Concrete building	Aug. 28, 1877	965	286	12	387
196,771	Siebel, John E., Chicago, Ill. Producing the mono or acid phosphate of ammonia	Nov. 6, 1877	34	10	12	765
188,758	Sieber, Charles, jr., Philadelphia, Pa. Hat-block spinner	Mar. 27, 1877	809	247	11	513
192,465	Siegelstyl, Henry, Louisville, Ky. Refrigerator	June 26, 1877	996	300	11	1136
196,710	Siegfried, Alexander H., Salem, assignor of one-half interest to H. Gerhart, Lewisburg, Pa. Machine for cutting screw-threads	Oct. 30, 1877	1076	312	12	747
7,862	Siemens, Charles W., Westminster, England. Metallurgical process and furnace. (Reissue)	Aug. 28, 1877	999	296, 297	12	391

Alphabetical list of patentees for the year 1877—Continued.

No.	Names, residence, and invention.	Date.	Monthly Volume.		Official Gazette	
			Spec.	Dr'g.	Vol.	Page.
7,863	Siemens, Charles W., Westminster, England. Regenerator-furnace.....(Reissue)..	Aug. 28, 1877	1001	297, 298	12	392
7,864	Same.....Valve for regenerator-furnaces(Reissue)..	Aug. 28, 1877	1007	298, 299	12	392
189,273	Same.....Converting cast iron into cast steel.....	Apr. 3, 1877	240	80, 81	11	590
190,915	Same.....Regenerative gas-furnace.....	May 15, 1877	824	243, 244	11	869
189,800	Siemens, Frederick, Dresden, German Empire. Manufacture of glass.....	Apr. 17, 1877	806	248	11	679
192,537	Same.....Hardening, tempering, and pressing glass.....	June 26, 1877	1072	323, 324	11	1146
197,418	Sifferman, Nathan, Dayton, Ohio. Horseshoe.....	Nov. 20, 1877	723	215	12	882
196,837	Sikes, Ladore V., East Otto, N. Y. Portable cider-mill.....	Nov. 6, 1877	99	31	12	775
197,498	Silberstein, Morris, New York, N. Y. Cord-fastening for cloaks, &c.....	Nov. 27, 1877	820	244	12	905
193,189	Silberzahn, Charles, and H. Hayssen, assignors to said Silberzahn and J. M. Koher, Sheboygan, Wis. Straw-cutter.....	July 17, 1877	647	197	12	116
	Silcox, Daniel S. (*See* Chapman, Samuel J., assignor.)					
190,080	Siler, Henry H., and T. A. Brooks, Saint Lawrence, N. C. Chuck.....	Apr. 24, 1877	1121	344	11	730
	Siller, Charles. (*See* Siller & Dessart.).....					
192,195	Siller, Henry C. and C., Jersey City, N. J., and C. H. Dessart, New York, N. Y. Frame for hammocks and cots.....	June 19, 1877	701	215	11	1086
189,581	Silsbee, Fenelon N. and P., Little Sioux, Iowa. Dropping and marking attachment for corn-planters.....	Apr. 17, 1877	589	182	11	652
	Silsbee, Newton. (*See* Silsbee, Fenelon N. and P.)					
	Silsbee, Peter. (*See* Silsbee, Fenelon N. and P.)					
7,759	Silva, Albert P., Elmira, assignor to J. Paret, New York, N. Y. Coat.....(Reissue)..	June 19, 1877	856	259	11	1105
	Silver & Deming Manufacturing Company. (*See* Fawcett, Edward W., assignor.)					
196,601	Silver, David R., Sidney, Ohio. Thill-coupling.....	Oct. 30, 1877	970	281	12	733
191,378	Silver, Frank, assignor of one-half interest to A. P. Adams, San Francisco, Cal. Preparing coffee.....	May 29, 1877	1293		11	949
7,766	Silver, Lovern B., Cleveland, Ohio. Combined chimney and ventilator.....(Reissue)..	June 26, 1877	1096	332	11	1149
187,987	Silver, Thomas, Nyack, N. Y. Lamp-burner.....	Mar. 6, 1877	32	8	11	385
192,945	Silvester, William, Pittsburg, assignor of one-fourth interest to R. H. Mahoffey, Allegheny City, Pa. Lamp-burner.....	July 10, 1877	406	121	12	76
195,409	Silvester, William, assignor of one-half interest to W. Walton, Pittsburg, Pa. Furnace for burning coal-slack under steam-boilers, &c.....	Sept. 18, 1877	674	200	12	511
197,570	Silvester, William, assignor of one-half interest to W. Armitage, Pittsburg, Pa. Bale-tie.....	Nov. 27, 1877	895	266	12	915
	Silvoeria, John H. (*See* McComas, Edwin F., assignor.)					
7,564	Sim, Thomas, Morristown, N. J. Preserving meat or animal matter.....(Reissue)..	Mar. 20, 1877	767	235, 236	11	499
	Simkins, John L. (*See* Dunton & Simkius.)					
	Simmerman, Jacob S. (*See* Brandriff & Simmerman.)					
192,294	Simmonds, George, San Francisco, Cal. Lamp.....	June 19, 1877	817	248	11	1100
	Simmons & Co., R. F. (*See* Nortemann, Ernst, assignor.)					
	Simmons, Charles. (*See* Denniston & Simmons.)					
193,352	Simmons, Edward M., Grand Rapids, Mich., assignor of one-half interest to H. D. Blakeslee, Buffalo, N. Y. Clip-plate for buggy springs.....	July 24, 1877	840	257	12	150
	Simmons, Henry A. (*See* Simmons, Jonathan P., assignor.)					
198,253	Simmons, Isaac, Baltimore, Md. Faucet or cock.....	Dec. 18, 1877	585	177	12	1045
191,723	Simmons, John P., assignor of one-third interest to J. H. Acuff, Cold Spring, Tenn. Corn-dropper.....	June 5, 1877	198	62	11	1003
196,995	Simmons, Jonathan P., assignor to H. A. Simmons, Fulton, N. Y. Packing the joints of barometers.....	Nov. 13, 1877	277	82	12	807
193,132	Simmons, Joseph, Coopersville, Mich. Clothes-drier.....	July 17, 1877	601	181	12	109
196,488	Simmons, Samuel, Wilton, Me. Abrasive composition.....	Oct. 23, 1877	843		12	703
191,258	Simmons, Samuel D., Brooklyn, assignor of one-half interest to A. L. Wood, New York, N. Y. Rotary pump and engine.....	May 29, 1877	1193	358	11	935
	Simon, Edwin S. (*See* Cohn, Abraham E., assignor.)					
192,794	Simon, Meyer, New York, N. Y. Shirt.....	July 3, 1877	238	69	12	44
	Simon, Theodor. (*See* Otto & Simon.)					
7,837	Simonds, Alonzo B., New York, N. Y. Carbon paper(Reissue)..	Aug. 7, 1877	238	70	12	266
198,054	Simonds, Calvin W., North Boscawen, N. H., assignor to C. Williams and A. H. Russell, Somerville, Mass. Railway-switch.....	Dec. 11, 1877	347	109	12	1066
7,464	Simonds, George F., assignor to Simonds Manufacturing Company, Fitchburg, Mass. Tempering and forming articles of steel.....(Reissue)..	Jan. 16, 1877	603	186	11	103
7,465	Same.....same(Reissue)..	Jan. 16, 1877	610	187	11	103
188,198	Simonds, George T., Fitchburg, Mass. Tempering and forming articles of steel.....	Mar. 6, 1877	236	74	11	411
	Simonds Manufacturing Company. (*See* Simonds, George F., assignor).....(Reissue.)					
189,066	Simonds, Nathan J., Woburn, Mass. Heel-stiffener for boots and shoes.....	Apr. 3, 1877	52	19	11	566
189,067	Same.....same.....	Apr. 3, 1877	52	20	11	566
191,510	Simonds, Nathaniel G., and E. M. Stevens, Boston, Mass. Apparatus for curing meat under pressure.....	May 29, 1877	1442	433	11	966
195,730	Simonds, Nathaniel G., Boston, Mass. Apparatus for smoking hams.....	Oct. 2, 1877	41	12	12	565
186,372	Simonds, Nathaniel M., Saint Louis, Mo. Plate for ranges and stoves.....	Jan. 16, 1877	569	173	11	98
190,631	Same.....Liquid-heater.....	May 8, 1877	534	159	11	824
198,697	Same.....Hot-water-tank couplings for ranges and stoves.....	Dec. 25, 1877	1016		12	1117
	Simonds, William E. (*See* Ford, Jerome B., assignor.)					
197,904	Simons, Darwin A., Manchester, N. H. Refrigerator.....	Dec. 4, 1877	198	60	12	974
194,183	Simons, John P., and G. Wallace, San Francisco, Cal. Rotary water-meter.....	Aug. 14, 1877	418	126	12	297
	Simons, Martin, *et al.* (*See* Preater, James H., assignor.)					
192,196	Simons, Michael, Yalesville, Conn. Tea and coffee pot.....	June 19, 1877	702	215	11	1086
190,787	Simonson, Flavel, Round Grove, Ill. Sawing-machine.....	May 15, 1877	708	209	11	854
	Simonson, George G. (*See* See & Simonson.)					
190,630	Simonson, Jacob A. S., Brooklyn, N. Y. Envelope.....	May 8, 1877	533	158	11	824
193,731	Same..... Chair and settee.....	July 31, 1877	1229	369	12	214
	Simonton, A., *et al.* (*See* Essig, Bartholomew, assignor.)					
197,497	Simonton, J. Chester, Tiro, Ohio. Device for teaching musical transposition.....	Nov. 27, 1877	818	244	12	904
195,663	Simpson, Ebon B., Bridgewater, assignor of one-half interest to I. M. McCue, Mount Solon, Va. Two-wheeled vehicle.....	Sept. 25, 1877	930	277	12	556
198,161	Simpson, Francis M., Baltimore, Md. Can and box.....	Dec. 11, 1877	460	143, 144	12	1021
187,988	Simpson, George M., Circleville, Ohio. Gate-hinge.....	Mar. 6, 1877	33	8	11	385
187,562	Simpson, Henry, Manchester, England. Traveling-bag frame.....	Feb. 20, 1877	647	201	11	308
188,197	Simpson, James, Liverpool, England. Head for caustic-soda drums.....	Mar. 6, 1877	235	73	11	411

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence or invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
7,819	Simpson, John, assignor of one-half interest to Dick & Church, Meadville, Pa. Metal-boring machine (Reissue)	July 31, 1877	1302	390	12	224
188,759	Simpson, John, and A. A. Pope, Cleveland, Ohio. Tackle-block	Mar. 27, 1877	808	247, 248	11	514
	Simpson, John M. (*See* Scotland & Simpson.)					
	Simpson, Joseph (*See* Smyth & Simpson.)					
198,420	Simpson, Michael H., Boston, Mass. Grasshopper-catcher	Dec. 18, 1877	736	223	12	1068
190,091	Simpson, Robert, assignor to Highland Foundry Company, Boston, Mass. Grate for stoves, furnaces, &c	Apr. 24, 1877	1132	344	11	730
192,038	Simpson, Robert, assignor, by mesne assignments, to Highland Foundry Company, Boston, Mass. Stove	June 19, 1877	592	180	11	1072
	Simpson, Robert W. (*See* McElhinney, Mark P., assignor.)					
195,959	Sims, Josse G., Summerville, Ga. Fertilizer-distributer	Oct. 9, 1877	283	79	12	608
197,905	Sinclair, Hector, Greenwich, Conn. Machine for removing and melting snow	Dec. 4, 1877	198	60	12	974
193,835	Sinclair, Henry M., Bellevue, Ohio. Feather-renovator	Aug. 7, 1877	37	12	12	239
	Singer Manufacturing Company. (*See* Dustin, Leander, assignor.)					
7,767	Singleton, Benjamin R., Highland, Ill., assignor, by mesne assignments, to H. S. Hopkins and W. McCully. Low-water alarm and fire-extinguisher Reissue	June 26, 1877	1097	332	11	1150
190,916	Singleton, Micajah T., and J. S. Wingfield, Atlanta, Ga. Gearing-machine	May 15, 1877	826	244	11	870
	Sinn, John L. (*See* King, Francis, assignor.)					
144,537	Sinnott, Mary E., Bakersfield, Vt. Cloth-cutting machine	Aug. 28, 1877	790	234	12	362
	Sinsley, John G. (*See* Todd & Sinsley.)					
193,561	Sirié, Charles A., Paris, France. Apparatus for carbureting gas	July 24, 1877	1046	313	12	177
196,257	Sirtaine, Godefroy, Verviers, Belgium. Separating vegetable matter from wool	Oct. 16, 1877	602	174	12	661
186,278	Sisson, George P., assignor of one-half interest to O. O. Roberts, Northampton, Mass. Jig-beater	Jan. 16, 1877	459	141	11	85
196,279	Same Corn-popper	Jan. 16, 1877	460	141	11	85
191,480	Sisum, William H. H., Brooklyn, assignor to H. R. Houghton, New York, N. Y. Fire-escape	May 29, 1877	1400	420	11	962
198,162	Sitton, William A., Cleburne, Tex. Carriage-axle box	Dec. 11, 1877	461	144	12	1021
189,143	Skaaraas, Ole N., Hale, Wis., assignor of one-half interest to L. Bagger & Co., Washington, D. C. Harvester	Apr. 3, 1877	112	40, 41	11	574
190,092	Skaggs, Newton J., Talladega, Ala. Plow-stock	Apr. 24, 1877	1133	344	11	730
192,024	Same Sash-balance	June 12, 1877	505	154	11	1048
186,373	Skeele, John W., Syracuse, N. Y. Car-coupling	Jan. 16, 1877	570	173	11	98
195,410	Skelton, Thomas, Milwaukee, assignor of one-half interest to C. Koehm, Paynesville, Wis. Horse-shoe	Sept. 18, 1877	675	200	12	512
	Skidmore, D. L., *et al.* (*See* Aldridge, Hiram, assignor.)					
198,163	Skillings, Hiram, Hutchinson, Minn. Revolving plow	Dec. 11, 1877	462	144	12	1021
192,025	Skinner, Albert S., Hastings, Mich. Lubricator	June 12, 1877	505	155	11	1048
	Skinner, Edwin S. (*See* Shoburne & Skinner.)					
	Skinner, Halcyon. (*See* Smith & Skinner.)					
189,068	Skinner, Le Grand, Erie, Pa. Stop-motion for governors	Apr. 3, 1877	53	20	11	566
198,254	Skinner, Miles T., White Rock, Tex. Combined cotton cultivator and planter	Dec. 18, 1877	586	177	12	1045
7,996	Skinner, Robert, and B. Bonnet, San Francisco, Cal., assignors, by mesne assignments, to J. E. Nuttman and C. E. Whitin, trustee. Concrete pavement (Reissue)	Dec. 18, 1877	762	230	12	1072
7,997	Same same (Reissue)	Dec. 18, 1877	762		12	1072
187,326	Skirrow, Robert W., Windsor, Conn. Rotary engine	Feb. 13, 1877	412	129	11	270
	Skree, Michael O., Houston, Minn. Corn-planter	Mar. 20, 1877	724	222	11	493
190,694	Slack, James M., assignor to J. M. Slack, Bristol, Pa. Knitting-machine	May 15, 1877	618	184	11	842
	Slack, Julia M. (*See* Slack, James M., assignor.)					
192,296	Sladdin, Joseph, Lawrence, Mass. Machine for making loom-harness	June 19, 1877	818	249	11	1101
193,674	Slade, Charlotte D., New York, N. Y. Doll's hat	July 31, 1877	1183	354	12	207
188,823	Slager, Albert L., Springfield, Ohio. Paper bag	Mar. 27, 1877	886	269	11	523
193,292	Slagle, Oliver, London, Ohio. Harrow	July 17, 1877	764	235	12	131
	Slanser, Joseph. (*See* Morris & Slanser.)					
193,290	Slater, Arba C., Uxbridge, and T. C. Ball, Northbridge, Mass. Bobbin-holder for spooling-machines	July 17, 1877	762	235	12	131
192,295	Slater, Charles B., Blanchester, Ohio. Grain-cleaner	June 19, 1877	817	249	11	1100, 1101
189,662	Slater, Luther, Cambridgeport, Mass. Wash-stand	Apr. 17, 1877	666	206	11	662
191,619	Slaton, Clifton H., Slaughterville, Ky. Tobacco-hoisting apparatus	June 5, 1877	101	31	11	990
189,395	Slaton, James R., and J. M. Wadlington, Morganfield, Ky. Ditching-machine	Apr. 10, 1877	391	124	11	618
196,996	Slavik, Johann, Rheydt, Prussia. Rotary engine	Nov. 13, 1877	278	82	12	807
7,780	Slawson, John B., New York, N. Y. Change-gate for cars (Reissue)	July 3, 1877	269	78	12	48
190,255	Same Fare-box	May 1, 1877	137	41	11	764
191,618	Slayton, Edwin M., Port Byron, New York, N. Y., assignor to Slayton Paper Barrel Company, Hartford, Conn. Manufacture of paper barrels	June 5, 1877	100	31	11	990
	Slayton Paper Barrel Company. (*See* Slayton, Edwin M., assignor.)					
191,891	Sleeper, Charles T., assignor of one-half interest to M. E. Otis; said Otis assignor to G. G. Benedict, Chicago, Ill. Packing-piston for rods, &c	June 12, 1877	371	114	11	1030
191,892	Sleeper, Charles T., assignor of one-half interest to G. G. Benedict, Chicago, Ill. Stuffing-box for steam-engines	June 12, 1877	372	114	11	1030
192,026	Same same	June 12, 1877	506	155	11	1048
188,426	Sleeper, Louisa F., assignor of one-half interest to C. B. Ritter, Philadelphia, Pa. Detaching horses	Mar. 13, 1877	470	146	11	450
188,427	Same Detaching apparatus for horses	Mar. 13, 1877	471	146	11	450
	Sleeth, Robert, *et al.* (*See* Seaman, Joseph S., assignor.)					
7,949	Sleicher, William, jr., Troy, N. Y. Treating iron (Reissue)	Nov. 13, 1877	498	147	12	840
198,523	Slemmens, Benjamin, Prairie City, Iowa. Transformable stove-truck	Dec. 25, 1877	851	259	12	1093
187,424	Slicer, Charles H., Baltimore, Md. Motor-spring	Feb. 13, 1877	503	156	11	282
198,608	Sl fer, Reuben H., Holden, Mo. Cultivator	Dec. 25, 1877	1017	309	12	1117
189,801	Slim, Joseph, Lockport, N. Y. Bottle-stopper	Apr. 17, 1877	807	249	11	679
195,411	Same Machine for pressing rings on glassware	Sept. 18, 1877	676	200	12	512
	Sloan, Frank B., *et al.* (*See* Clarkson, Frank S., assignor.)					
	Same (*See* Luppert, George, assignor.)					
187,185	Sloan, James D., assignor to C. Dorcy, G. F. Ronian, and J. K. Orr, Lock Haven, Pa. Carpet-stretcher	Feb. 6, 1877	249	82	11	236
185,839	Sloan, P. Elmendorf, Syracuse, N. Y. Car-coupling	Jan. 2, 1877	25	8	11	12
186,280	Same Newspaper-file	Jan. 16, 1877	460	142	11	85
192,813	Same Tinted window-light	July 10, 1877	315	92	12	63
192,297	Slocumb, John L., Edwards' Depot, Miss. Cotton-bale tie	June 19, 1877	819	249	11	1101

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Sloss, Solomon. (*See* Elwood, John J., assignor.)					
7,973	Slusser, Benjamin, Sidney, Ohio, assignor, by mesne assignments, to F. B. Hunt, J. B. Fisher, and A. McCallum. Sulky-plow.....(Reissue)..	Nov. 27, 1877	1063	318	12	938
194,737	Small, Dexter M., New York, N. Y. Gas-test gage.....	Aug. 28, 1877	968	287	12	388
	Small, Edward. (*See* Small, James W. and E.)					
	Small, Eleazer, *et al.* (*See* Long, Samuel N., assignor.)					
190,725	Small, James W and E., Aurora, Ill. Hay-loader.....	May 15, 1877	655	194	11	847
	Smalley, John, *et al.* (*See* Behrens, George E., assignor.)					
194,791	Smalley, Nathan, Providence, R. I. Scuttle or hatchway for stables.....	Sept. 4, 1877	37	12	12	405
186,890	Smart, Albert J., assignor to Wiley & Russell Manufacturing Company, Greenfield, Mass. Screw-cutting die.....	Jan. 30, 1877	1091	337	11	189
194,792	Smart, David V. B., Troy, N. Y. Car-coupling.....	Sept. 4, 1877	38	12	12	405
196,394	Smead, Ephraim A., Tioga, Pa. Self-measuring oil-tank.....	Oct. 23, 1877	750	216	12	691
	Smear, John S. (*See* Adams Jesse, assignor.)					
196,711	Smeaton, Robert G., Milwaukee, Wis. Branding-stamps.....	Oct. 30, 1877	1078	313	12	747
190,521	Smerdon, William H., and B. F. Phillips, Taunton, Mass. Saw-set.....	May 8, 1877	424	124	11	809
198,470	Smidt, Henry, assignor of five-eighths interest to W. V. Smith, New York, N. Y. Shutter-worker.....	Dec. 25, 1877	800	242	12	1086
	Smiley, Francis E. (*See* Pierce & Smiley.)					
192,393	Smiley, James A., Prattville, Ala. Cotton-boll or hull-separator.....	June 26, 1877	937	281	11	1128
193,732	Smitback, Thore E., Utica, Wis. Washing-machine.....	July 31, 1877	1231	369	12	214
	Smith & Co., Amor. (*See* Smith, Amor, assignor.)					
	Same.... (*See* Smith, Amor and L., assignors.)					
	Smith & Co., H. D. (*See* Smith, George F., assignor.)					
	Smith & Lafferty. (*See* Lafferty, Robert M., assignor.)					
	Smith & Sayre Manufacturing Company. (*See* Mackenzie, Philip W., assignor.)					
194,478	Smith, Abiel M., Portland, Me. Sheave for pulley-blocks.....	Aug. 21, 1877	723	215	12	344
187,563	Smith, Addison, New York, N. Y. Automatic relief-valve for casks.....	Feb. 20, 1877	648	202	11	308
189,069	Smith, Albert B., Geneva, N. Y. Cartridge.....	Apr. 3, 1877	54	20	11	566
189,804	Smith, Albert M., Brooklyn, assignor of one-half interest to J. B. Colt, New York, N. Y. Hair-crimping pin.....	Apr. 17, 1877	809	249	11	680
198,701	Smith, Albert S., assignor of one-half interest to L. D. Junkins, Boston, Mass. Tree-protector.....	Dec. 25, 1877	1021	301	12	1118
186,374	Smith, Alexander, and H. Skinner, Yonkers, N. Y.; said Skinner assignor to said Smith. Loom.....	Jan. 16, 1877	570	173, 174, 175, 176	11	98
189,327	Smith, Alexander, Palmyra, N. Y. Monument.....	Apr. 10, 1877	330	105	11	609
191,290	Same..... same.....	May 29, 1877	1225	368	11	940
	Smith, Alfred, *et al.* (*See* Couch, Edward J., assignor.)					
188,428	Smith, Amor, assignor to A. Smith & Co., Cincinnati, Ohio. Extracting oleomargarine from animal fats.....	Mar. 13, 1877	472		11	450
188,429	Smith, Amor and L., assignor to A. Smith & Co., Cincinnati, Ohio. Reducing animal fats.....	Mar. 13, 1877	473	146	11	450
	Smith, Ananias. (*See* Smith, William A., assignor.)					
189,664	Smith, Andrew A., Boulder, Colo. Board-bath.....	Apr. 17, 1877	667	207	11	662
	Smith, Andrew G. (*See* Aborn, James, assignor.)					
7,642	Smith, Andrew J., assignor, by mesne assignments, to H. L. McCormick, Chicago, Ill. Grain-binder.....(Reissue)..	Apr. 24, 1877	1185	357	11	737
193,424	Smith, Anselmo B., Denver, Colo. Chuck for metal-lathes.....	July 24, 1877	910	277	12	159
193,426	Smith, Anthony M., Brooklyn, N. Y. Shade-roller.....	July 24, 1877	912	277	12	160
194,621	Smith, Araunah M., Edinburg, Pa. Torpedo for oil-wells.....	Aug. 28, 1877	861	256	12	373
196,942	Smith, Augustus, Pinckney, Mich. Whip-socket and line-holder.....	Nov. 6, 1877	214	63	12	790
	Smith, Augustus B. (*See* Clark & Smith.)					
195,666	Smith, Avery E., La Porte, Ind. Millstone-dressing machine.....	Sept. 25, 1877	932	278	12	556
191,782	Smith, B. Burgh, sr., Greenville, S. C. Umbrella-support.....	June 12, 1877	265	83	11	1017
189,805	Smith, Benjamin F., assignor of one-half interest to W. K. Bowman, Philadelphia, Pa. Fish and other traps.....	Apr. 17, 1877	810	250	11	680
	Smith, Burr R. (*See* Barlow, James R., assignor.)					
193,564	Smith, Byron C., Auburn, N. Y. Hame-terret.....	July 24, 1877	1050	314	12	178
	Smith, Charles. (*See* Buchanan & Smith.)					
191,481	Smith, Charles, New Haven, Conn. Sleigh-runner.....	May 29, 1877	1401	420	11	962
	Smith, Charles A. (*See* Driver & Smith.)					
7,954	Smith, Charles D., Philadelphia, Pa., assignor to D. J. Morrell. Steam-boiler furnace.....(Reissue)..	Nov. 20, 1877	756	225	12	887
190,093	Smith, Charles D., Boston, Mass. Steam-boiler.....	Apr. 24, 1877	1134	345	11	730
191,724	Same.... Water-gage.....	June 5, 1877	199	63	11	1001
	Smith, Charles E. (*See* Smith, Edwin, assignor.)					
187,188	Smith, Charles E., Richmond, Ky. Buggy-top.....	Feb. 6, 1877	252	82	11	237
190,633	Smith, Charles E., and E. J. Beverstock, Allegan, Mich. Spring bed-bottom.....	May 8, 1877	536	159	11	825
197,745	Smith, Charles E., Brooklyn, N. Y. Breast-pin fastening.....	Dec. 4, 1877	39	13	12	952
	Smith, Charles H., *et al.* (*See* Schulz, Friedrich W., assignor).....(Reissue.)					
192,628	Smith, Charles H., Chicago, Ill. Lightning-rod.....	July 3, 1877	74	22	12	22
192,718	Same .. Coupling for lightning-rods.....	July 3, 1877	163	46	12	35
194,789	Smith, Charles H., assignor to P. and F. Corbin, New Britain, Conn. Latch for doors, &c	Sept. 4, 1877	36	12	12	405
198,471	Smith, Charles H., Chicago, Ill. Lightning-rod.....	Dec. 25, 1877	800	243	12	1086
190,632	Smith, Charles S., assignor to H. J. Bush and G. L. Laflin, Westfield, Mass. Steam-generator.....	May 8, 1877	535	159	11	825
190,381	Smith, Christian N., Dayton, Ohio. Middlings-separator.....	May 1, 1877	262	78	11	780
186,632	Smith, Christopher H., assignor of one-half interest to B. B. Miles, Philadelphia, Pa. Bureau-bedstead.....	Jan. 23, 1877	830	257	11	145
192,844	Smith, Christopher W., Gloucester, England. Cleansing cloths, yarns, and waste....	July 10, 1877	316	92, 93	12	63
192,662	Smith, Coe D. Smithtown Branch, N. Y. Whiffletree.....	July 3, 1877	117	32	12	28
196,392	Smith, Daniel A., Marak, Kans. Wire-stretcher.....	Oct. 33, 1877	748	216	12	691
	Smith, Daniel S. (*See* Darke & Smith.)					
196,127	Smith, Daniel W., assignor of one-half interest to Myers, Osborn & Co. Stove-grate..	Oct. 16, 1877	471	137	12	643
188,970	Smith, David G., Carbondale, assignor of one-half interest to G. B. Smith, Dunmore, Pa. Bottle-stopper.....	Mar. 27, 1877	1027	316	11	543
193,836	Smith, Dexter, assignor to D. B. Wesson, Springfield, Mass. Revolving fire-arm	Aug. 7, 1877	38	12	12	239
196,491	Smith, Dexter, Springfield, Mass. Revolving fire-arm.....	Oct. 23, 1877	815	243	12	703
	Smith, Dillwyn. (*See* Imlay, William L., assignor.)					
195,542	Smith, Donald D., Rockfall, Conn. Watch-key.....	Sept. 25, 1877	814	241	12	539
187,564	Smith, Earle H., New York, N. Y. Sewing-machine.....	Feb. 20, 1877	649	202	11	308

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
194,477	Smith, Ebenezer C., and G. B. Reily, Grand Rapids, Mich. Invalid-chair	Aug. 21, 1877	722	215	12	344
189,663	Smith, Edgar B., Nyack, N. Y. Ironing-table	Apr. 17, 1877	667	206	11	662
	Smith, Edmond C. (*See* Daneel & Smith.)					
	Smith, Edward. (*See* Cowles, Sidney) (Reissue.)					
195,960	Smith, Edward W., Orange, N. J. Semicircular comb	Oct. 9, 1877	284	79	12	609
187,989	Smith, Edwin, assignor to C. E. Smith, Whitestown, N. Y. Washing-machine	Mar. 6, 1877	33	8	11	385
	Smith, Edwin C. (*See* Henkle, Leonard, assignor.)					
	Smith, Elbert S. (*See* Smith, John A. and E. S.)					
198,421	Smith, Eldridge J., Washington, D. C. Chair	Dec. 18, 1877	737	223	12	1068
	Smith, Eli J. (*See* Mason & Smith.)					
189,802	Smith, Elihu, Albany, N. Y. Chamber-closet	Apr. 17, 1877	807	249	11	680
197,948	Smith, Elijah S., Good Hope, Ill. Windmill	Dec. 11, 1877	247	77	12	990
188,199	Smith, Elizabeth W., assignor to D. Sutter, Philadelphia, and A. Miller, Moorestown, Pa. Book carrier and holder	Mar. 6, 1877	237	75	11	411
	Smith, Ellen M. (*See* Smith, John, assignor.)					
185,917	Smith, Emery W., Boston, Mass. Scholar's companion	Jan. 2, 1877	163	50	11	30
197,677	Smith, Emmet L., Jackson, Mich. Corset	Nov. 27, 1877	997	298	12	930
187,676	Smith, Ephraim, Bellaire, Ohio. Harvester-rake	Feb. 20, 1877	757	235	11	322
	Smith, Erasmus D., jr., *et al.* (*See* Rice, Obed M., assignor.)					
188,969	Smith, Ernest, London, England. Folding-chair	Mar. 27, 1877	1026	315	11	543
192,134	Smith, Ferdinand E., Prattsville, Ala. Cotton cleaner and condenser	June 19, 1877	638	195	11	1077
194,738	Same. Cotton-gin feeder	Aug. 28, 1877	968	288	12	388
	Smith, Francis M. (*See* Thompson, John A., assignor.)					
194,735	Smith, Frederick H., Bayswater, Great Britain. Lamp for burning hydrocarbon oils for railway-signals, &c	Aug. 28, 1877	966	287	12	387
	Smith, Friend W. (*See* Egge & Smith.)					
189,807	Smith, Friend W., Bridgeport, Conn. Toy money-box	Apr. 24, 1877	935	285	11	704
194,848	Smith, Friend W., and F. Egge, Bridgeport, Conn. Padlock	Sept. 4, 1877	90	29	12	413
194,849	Same. Padlock-case	Sept. 4, 1877	92	30	12	413
192,299	Smith, George A., Boston, Mass. Copying-press	June 19, 1877	821	250	11	1101
192,300	Same. same	June 19, 1877	822	250	11	1101
	Smith, George B. (*See* Smith, David G., assignor.)					
196,712	Smith, George C., Hamilton, assignor of one-fourth interest to A. O. Hall, Cincinnati, Ohio. Piano-hammer	Oct. 30, 1877	1078	313	12	743
	Smith, George C. C. (*See* Bennett & Smith.)					
186,502	Smith, George F., assignor to H. D. Smith & Co., Plantsville, Conn. Carriage clip	Jan. 23, 1877	706	217	11	128
193,563	Smith, George F., Michigan City, Ind. Refrigerator	July 24, 1877	1047	314	12	178
	Smith, George H. (*See* Crist & Smith.)					
193,899	Smith, George H., Rockford, Ill. Sulky-plow	Aug. 7, 1877	97	31	12	248
197,906	Smith, George H., Freeport, Ill. Gate	Dec. 4, 1877	199	60	12	974
192,538	Smith, George K., Freeport, Ill. Combined colter and jointer	June 26, 1877	1074	324	11	1146
187,923	Smith, George T., Washington, D. C. Middlings-separator	Feb. 27, 1877	1025	316	11	366
194,539	Same. same	Aug. 28, 1877	791	235	12	363
189,276	Smith, Gerritt, Astoria, assignor of one-half interest to G. B. Prescott, New York, N. Y. Multiple telegraph	Apr. 3, 1877	244	82	11	591
188,685	Smith, Hamilton E., New York, N. Y. Mangle	Mar. 20, 1877	726	223	11	494
188,686	Same. Ironing apparatus	Mar. 20, 1877	727	223	11	494
195,176	Same. Washing-machine	Sept. 11, 1877	438	130	12	469
	Smith, Hanway & Co. (*See* Clotworthy, William P., assignor.)					
198,700	Smith, Harris B., Bridgeport, Conn. Labeling-machine	Dec. 25, 1877	1020	310	12	1118
193,047	Smith, Henry, assignor of one-half interest to W. V. Smith, New York, N. Y. Shutter-worker	July 10, 1877	504	151	12	89
197,675	Smith, Henry S., San Francisco, Cal. Car-wheel	Nov. 27, 1877	996	298	12	930
189,274	Smith, Henry T., Washington, D. C. Rope-clamp	Apr. 3, 1877	242	81	11	590
188,079	Smith, Henry W., assignor to self and T. C. Snyder, Waynesburg, Ohio. Sheet-metal roofing	Mar. 6, 1877	115	34	11	396
197,676	Smith, Henry W., Rainsburg, Pa. Sled-brake	Nov. 27, 1877	997	298	12	930
190,634	Smith, Herbert H., Columbus, Ohio. Pipe molding-machine	May 8, 1877	536	159, 160	11	825
	Smith, Herbert N. (*See* Jackson, Walter M., assignor) (Reissue.)					
	Smith, Herbert M. (*See* Wade, Nicholas K., assignor.)					
190,788	Smith, Herbert S., Brooklyn, N. Y. Reclining-chair	May 15, 1877	708	209	11	854
189,510	Smith, Hezekiah B., and J. Salter, jr., Smithville, N. Y. Machine for making wooden rods and dowel-pins	Apr. 10, 1877	495	156, 157	11	631
189,665	Smith, Hiram, Norwalk, Ohio. Stand-pipe for supplying locomotives with water	Apr. 17, 1877	668	207	11	662
193,046	Smith, Hiram B., assignor to O. Conrad, Philadelphia, Pa. Supporting-fixture for heating apparatus	July 10, 1877	503	151	12	89
198,422	Smith, Hiram B., assignor of one-half interest to C. E. Paine & Son, Philadelphia, Pa. Fruit-drier	Dec. 18, 1877	739	223	12	1068
192,298	Smith, Hiram F., Richmond, Mich. Hay rake and loader	June 19, 1877	819	249, 250	11	1101
194,736	Smith, Hiram M., Richmond, Va. Machine for planing off the heads and points of rivets	Aug. 28, 1877	967	287	12	387
188,973	Smith, Horatio M., Chicago, Ill. Stove	Mar. 27, 1877	1029	316	11	543
194,479	Smith, Ira T., Hamden, Conn. Sewing-machine needle	Aug. 21, 1877	724	216	12	341
	Smith, Isaac. (*See* Macdonald, Franklin, assignor.)					
191,187	Smith, Isaac B., Hornellsville, N. Y. Spark-arrester	May 22, 1877	1105	330	11	915
	Smith, James. (*See* Smith, John W., assignor.)					
193,190	Smith, James B., New York, N. Y. Pen and pencil case	July 17, 1877	648	197	12	116
197,803	Smith, James C., Ashton, Ill. Washing-machine	Dec. 4, 1877	97	30	12	959
188,309	Smith, James E., Gloucester City, N. J. Pump	Mar. 13, 1877	349	110	11	433
	Smith, James F. (*See* Armstrong, Smith & Armstrong.)					
198,316	Smith, James G., Chagrin Falls, Ohio. Cooking apparatus	Dec. 18, 1877	635	193	12	1053
194,057	Smith, James H., Somerville, N. J. Pattern-cylinder for cloth-finishing machines	Aug. 14, 1877	276	82	12	279
196,173	Smith, James S., Beebe Station, Ark. Churn	Jan. 9, 1877	356	108	11	64
195,664	Smith, James S., Middletown, Conn. Tooth-pick	Sept. 25, 1877	930	277	12	556
188,922	Smith, James T., assignor to self and J. W. Smith, Baltimore, Md. Furnace door-way for steam-boilers	Feb. 27, 1877	1025	316	11	366
186,501	Smith, James W., Humansville, Mo. Churn	Jan. 23, 1877	706	217	11	128
195,177	Smith, James W., Fancy Creek, Kans. Revolving harrow	Sept. 11, 1877	439	131	12	470
193,191	Smith, Jason, Charlestown, Mass. Leather-crimping machine	July 17, 1877	649	197, 193	12	117
189,582	Smith, J., Nottingham, Jersey City, N. J. Seal-lock	Apr. 17, 1877	590	183	11	652
	Smith, John, *et al.* (*See* Couch, Edward J., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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187,058	Smith, John, Horicon, Wis. Windmill	Feb. 6, 1877	135	44	11	221
188,824	Smith, John, Buffalo, N. Y. Horseshoe-swage	Mar. 27, 1877	886	269	11	524
190,917	Smith, John, Horicon, Wis. Converting-motion	May 15, 1877	826	245	11	870
194,185	Smith, John, and J. Snashell, Buffalo, N. Y. Balance-rund	Aug. 14, 1877	420	126	12	297
196,943	Smith, John, and E. T. Thurston, Rockville Center, N. Y. Velocipede	Nov. 6, 1877	214	63	12	790
197,421	Smith, John, assignor of one-half interest to E. M. Smith, Fall River, Mass. Carriage-wheel axle	Nov. 20, 1877	725	216	12	882
193,562	Smith, John A. and E. S., Pond Fork, Ky. Domestic spinning-wheel	July 24, 1877	1047	313 314	12	177
196,490	Smith, John A., North East, Pa. Organ-action	Oct. 23, 1877	844	243	12	703
188,080	Smith, John B., Milwaukee, Wis. Coffee-pot	Mar. 6, 1877	116	34	11	396
194,790	Smith, John C., Evansville, Ind. Machine for the manufacture of hoes	Sept. 4, 1877	37	12	12	405
192,941	Smith, John E., Shiloh, Ohio. Grain-separator	July 10, 1877	403	120	12	76
188,310	Smith, John H., Buffalo, and J. Moss, assignors of one-third interest to E. Wiman, New York, N. Y. Device for printing and recording cash receipts	Mar. 13, 1877	350	110 111	11	433
	Smith, John J. (*See* Good, Adam, assignor.)					
	Smith, John J., *et al.* (*See* Matlock, John W., assignor.)					
196,393	Smith, John J., Unionville, Mo. Sulky-harrow	Oct. 23, 1877	749	216	12	691
	Smith, John P. (*See* MacLellan & Smith.)					
189,666	Smith, John S., Jackson, Mich. Boiler-flue cleaner	Apr. 17, 1877	669	207	11	662
198,702	Smith, John T., assignor of one-half interest to W. G. Morris, Aurora, Ill. Thill-tug	Dec. 25, 1877	1022	311	12	1118
	Smith, John W. (*See* Smith, James T., assignor.)					
198,225	Smith, John W., Boston, assignor to self and J. Smith, Cambridge, Mass. Shaving-mug	Dec. 18, 1877	543	168	12	1040
187,187	Smith, Jonathan, and C. R. Messinger, Toledo, Ohio. Tobacco-spraying apparatus	Feb. 6, 1877	250	82	11	236
187,924	Same.....Distributing liquids through tobacco	Feb. 27, 1877	1027		11	366
144,538	Smith, Jonathan M., Dedham, Mass. Portable fence	Aug. 28, 1877	790	235	12	362
	Smith, Joseph. (*See* Brown & Smith.)					
191,379	Smith, Joseph H., Athens, Tenn. Turbine water-wheel	May 29, 1877	1284	392	11	949
187,921	Smith, Joseph M., Rochester, N. Y., assignor of one-third interest to J. H. Lindsay, Allegheny, Pa. Saw-gummer	Feb. 27, 1877	1023	315	11	366
	Smith, Joseph N. (*See* Sutherland, Daniel A., assignor.)					
	Same.....same	(Reissue.)				
	Smith, Leander. (*See* Smith, Amor and L.)					
	Smith, Lee S. (*See* Finney, Joseph R., assignor.)					
192,352	Smith, Leonard, Bradford, England. Wool-combing machine	June 26, 1877	893	268	11	1122
191,080	Smith, Leverett E., Rockport, Mass. Hot-air register	May 22, 1877	1005	299	11	901
	Smith, Luther L. (*See* Wallace & Smith.)					
186,375	Smith, Lyman T., New Haven, Conn. Leather-covered nut	Jan. 16, 1877	576	176	11	98
193,425	Smith, Marshall M., Kirksville, Mo. Adding-machine	July 24, 1877	911	277	12	160
187,059	Smith, Maurice J., W. H. Ryder, and W. W. Clark, Clark's Factory, N. Y. Milk-pan	Feb. 6, 1877	136	45	11	221
	Smith, Merritt H. (*See* Hopkins & Smith.)					
186,218	Smith, Miles, Springfield, Vt. Socket for scythe-shanks	Jan. 16, 1877	409	125	11	78
189,275	Same.....Scythe-snath fastening	Apr. 3, 1877	243	81	11	591
197,744	Smith, Moses C., Starkville, N. Y. Hop-vine stripper and separator	Dec. 4, 1877	37	12	12	951
	Smith, Nelson E., administrator. (*See* Smith, Russell)	(Reissue.)				
189,277	Smith, Oberlin, Bridgeton, N. J. Metal-drawing press	Apr. 3, 1877	249	82, 83	11	591
192,946	Same.....Automatic egg-boiler	July 10, 1877	406	122	12	76
188,972	Smith, Oliver N., Shreve, Ohio. Fruit-drier	Mar. 27, 1877	1028	316	11	543
186,641	Smith, Orlando H., Ellicottsville, N. Y. Fence	Jan. 23, 1877	831	257	11	145
7,572	Smith, Orren M., assignor to S. W. Evans & Son, Frankford, Pa. Umbrella tip-cup	Mar. 27, 1877	1066	327	11	548
		(Reissue.)				
186,630	Smith, Orren M., assignor to S. W. and S. W. Evans, jr., Frankford, Pa. Umbrella runner and tip-cup	Jan. 23, 1877	830	256	11	145
189,396	Smith, Orren R., Raleigh, N. C. Cotton-picker	Apr. 10, 1877	393	125	11	618
192,947	Smith, Orville T., Brooklyn, N. Y. Merchandise-tag	July 10, 1877	409	122	12	77
194,184	Smith, Pierce T., and R. L. Cochran, Burlington, Iowa; said Cochran assignor to said Smith. Insole for boots and shoes	Aug. 14, 1877	419	126	12	297
	Smith, Portus B., *et al.* (*See* Harden, Henry D., assignor.)					
195,200	Smith, Richard, Sherbrooke, Canada. Plowshare	Sept. 11, 1877	460	137	12	473
187,186	Smith, Richard B., Centredale, Iowa. Egg-holder	Feb. 7, 1877	250	82	11	236
	Smith, Robert C. (*See* Garrett, James, assignor.)					
	Smith, Roland H. (*See* Smith, William and R. H.)					
189,144	Smith, Roswell T., Nashua, N. H. Paper-perforating machine	Apr. 3, 1877	114	41	11	574
7,823	Smith, Russell, deceased, by N. E. Smith, administrator, Richford, Vt. Milk-cooler	July 31, 1877	1306	391	12	225
		(Reissue.)				
	Smith, Samuel M. (*See* Meehan, Patrick W., assignor.)					
	Smith, Samuel R. (*See* Myers & Smith.)					
	Smith, Sarah E., *et al.* (*See* Bromley, John, assignor.)					
198,423	Smith, Solomon P., assignor to H. J. King, Troy, N. Y. Spring bed-bottom	Dec. 18, 1877	740	224	12	1069
188,971	Smith, Thomas T. V., Yarmouth, Nova Scotia. Locomotive	Mar. 27, 1877	1027	316	11	543
198,703	Smith, Walton D., assignor of one-half interest to C. Emery, Prophetstown, Ill. Device for hanging pictures	Dec. 25, 1877	1023	311	12	1118
188,684	Smith, W. Bell, Charleston, S. C. Ratchet-brace	Mar. 20, 1877	725	222	11	494
	Smith, Willard H. (*See* Fowler, Lewis, Smith & Fischer.)					
186,960	Smith, Willard H., Brooklyn, N. Y. Wick-raiser	Feb. 6, 1877	47	16	11	208
	Smith, William. (*See* Danforth & Smith.)					
	Same.....(*See* Steeples, Smith, Boles & Stambaugh.)					
7,593	Smith, William, Pittsburg, Pa., assignor, by mesne assignments, to M. McCullough and J. H. Dalzell. Apparatus for making plumbago crucibles	Apr. 3, 1877	288	92	11	596
		(Reissue.)				
188,200	Smith, William, Cicero, Ind. Supporting-thill	Mar. 6, 1877	238	75	11	411
190,918	Smith, William and R. H., Pittsburg, Pa. Gas-holder	May 15, 1877	827	245	11	870
190,919	Smith, William, San Francisco, Cal. Effluvia-ejectors for water-closets	May 15, 1877	828	245	11	870
190,920	Same.....Water meter or engine	May 15, 1877	829	246	11	870
196,492	Smith, William, and A. D. Shumo, Benton Harbor, Mich. Bed-bottom	Oct. 23, 1877	846	243	12	704
197,420	Smith, William, Pittsburg, Pa. Apparatus for the manufacture of gas	Nov. 20, 1877	724	216	12	882
	Smith, William A. (*See* Stambaugh & Smith.)					
193,299	Smith, William A., Niagara Falls, assignor of one-fourth interest to A. Smith, Buffalo, N. Y. Method of preventing the alteration or counterfeiting of monetary papers	July 17, 1877	772	237	12	132
195,665	Smith, William B., assignor of one-half interest to B. L. McLendon, Dadeville, Ala. Railway-gate	Sept. 25, 1877	931	278	12	556
	Smith, William C. (*See* Ronsseau & Smith.)					
	Same.....(*See* Rosseau, David, assignor.)					
	Smith, William C., *et al.* (*See* White, Hiram J., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'gs.	Vol.	Page.
191,081	Smith, William C., New Haven, Conn. Apparatus for attaching harness to shafts	May 22, 1877	1006	299	11	902
	Smith, William D. (*See* Hermans, Edward E., assignor.)					
197,419	Smith, William D, Keithsburg, Ill. Screw-propeller	Nov. 20, 1877	724	215	12	882
	Smith, William F., *et al.* (*See* Rousseau & Smith, assignors.)					
	Smith, William G. (*See* Fell & Bunster.)					
	Smith, William H. (*See* Beach, Henry H., assignor.)					
	Same (*See* Fell, Ambrose C., assignor.)					
193,794	Smith, William H., assignor of two-thirds interest to W. Mullenix, Bristol, Tenn., and D. Sullens. Machine for tempering clay	July 31, 1877	1298	389	12	223
189,803	Smith, William J., Dayton, Ohio. Burglar-alarm	Apr. 17, 1877	808	247	11	680
188,548	Smith, William M., Augusta, Ga. Cotton-bale tie	Mar. 20, 1877	595	184	11	476
	Smith, William V. (*See* Smidt, Henry, assignor.)					
	Same (*See* Smith, Henry assignor.)					
192,466	Smith, Zalmon W., Addison, N. Y. Stanchion	June 26, 1877	997	360	11	1126
192,353	Smits, Theodore A., New York, N. Y. Window-blind	June 26, 1877	895	268	11	1122
194,007	Smoot, Thomas E., assignor of one-third interest to A. M. Parkhill, Florence, Ala. Garden-plow	Aug. 7, 1877	210	62	12	262
7,827	Smoot, William S., Ilion, N. Y. Magazine fire-arm (Reissue)	July 31, 1877	1311	393	12	225
7,828	Same same (Reissue)	July 31, 1877	13, 14	393	12	226
196,545	Smoot, William S., and H. H. Hamilton, assignors to E. Remington & Sons, Ilion, N. Y. Cartridge-loading machine	Oct. 30, 1877	917	266	12	725
196,050	Smyser, George M., assignor to self and J. B. Aguew, Philadelphia, Pa. Douche	Oct. 9, 1877	373	106	12	621
191,012	Smyth, David M., East Northwood, N. H., assignor of one-half interest to G. L. Ward, Boston, Mass. Opening and closing gas-cocks by electro-magnetism	May 22, 1877	944	279	11	893
190,789	Smyth, George M., Brooklyn, N. Y. Liquid-diffuser	May 15, 1877	709	209	11	854
187,189	Smyth, James C., assignor to G. L. Ward, Boston, and O. S. Smyth, Lynn, Mass. Machine for stitching hooks with staples	Feb. 6, 1877	252	83	11	237
192,663	Smyth, James R., New York, N. Y. Window-shade roller	July 3, 1877	118	32	12	28
	Smyth, Orianna S., *et al.* (*See* Smyth, James C., assignor.)					
192,948	Smyth, Samuel R., and J. Simpson, Manchester, England. Refining iron and steel	July 10, 1877	409	123	12	77
	Smythe, Thomas H., *et al.* (*See* Pepple, Edmund, assignor.)					
193,675	Smythe, Thomas H, Hartford, Mich. Moter	July 31, 1877	1183	354	12	207
	Snashell, Jabez. (*See* Smith & Snashell.)					
186,174	Snead, Edward F., and H. C. Stinnett, Buchanan, Va. Rotary churn	Jan. 9, 1877	357	109	11	64
195,667	Snead, John E., and R. A. Burns, Baltimore, Md. Apparatus for preventing horses from cribbing	Sept. 25, 1877	933	278	12	557
188,688	Snediker, William E., Trenton, N. J. Vise	Mar. 20, 1877	729	224	11	494
196,713	Snelbaker, David T., Cincinnati, Ohio, assignor to H. McMurchy and T. E. Snelbaker. Toy buzz	Oct. 30, 1877	1079	313	12	748
	Snelbaker, Thomas E., *et al.* (*See* Snelbaker, David T., assignor.)					
186,891	Snell, George, and D. J. McDermott, Theresa, N. Y. Washing-machine	Jan. 30, 1877	1091	338	11	189
191,259	Snell, George S, Saint Louis, Mo. Brush	May 29, 1877	1195	358	11	936
	Snell, Henry. (*See* Huber & Snell.)					
197,422	Snell, William W., Rushford, Minn. Bed-bottom	Nov. 20, 1877	726	217	12	883
186,046	Snellbaker, William H. H., Saint Louis, Mo., assignor to Moline Malleable Iron Works, Moline, Ill. Spring-seat riser	Jan. 9, 1877	238	72	11	48
186,633	Snider, Allen J., and D. C. Wolfe, Keota, Iowa. Index for books	Jan. 23, 1877	832	257	11	145
192,197	Snively, Francis M., Bellaire, Ohio. Sad-iron	June 19, 1877	703	215	11	1086
186,503	Snook, Albert, Oswego, Ill. Lightning-rod connecting clip	Jan. 23, 1877	707	217	11	128
196,128	Same Combined wind-wheel and water-power	Oct. 16, 1877	473	137	12	643
189,806	Snook, William S., Oakland, Cal. Water-filter	Apr. 17, 1877	810	250	11	680
193,565	Snow, Charles P., Freeport, Ill. Gate-fastening	July 24, 1877	1050	315	12	178
	Snow, George B., *et al.* (*See* Fletcher, Thomas, assignor.)					
188,687	Snow, George K., Watertown, assignor to Reversible Collar Company, Boston, Mass. Metallic collar-box	Mar. 20, 1877	728	223	11	494
187,060	Snow, Henry H., New Haven, Conn. Paper box	Feb. 6, 1877	137	45	11	221
187,061	Same Card-holder	Feb. 6, 1877	138	46	11	221
189,807	Same Putting up confectionery	Apr. 17, 1877	811	250	11	680
	Snow, John. (*See* Kelly, John, assignor.)					
	Snow, Norman, *et al.* (*See* Hibbard, Silas H., assignor.)					
	Snow, William. (*See* Galbraith, Robert S., assignor.)					
194,480	Snow, William B., Brooklyn, N. Y. Duplex pumping-engine	Aug. 21, 1877	726	216	12	345
197,907	Same Steam-radiator	Dec. 4, 1877	200	61	12	975
187,425	Snowdon, Henry, Baltimore, Md. Hoisting-machine	Feb. 13, 1877	505	156	11	282
188,201	Snowden, Thomas, Pittsburg, Pa. Steam-boiler feed-water heater	Mar. 6, 1877	229	75	11	411
	Snyder, Albert. (*See* Worth, Samuel H., assignor.)					
186,175	Snyder, Eugene, Harrisburg, Pa. Device for decanting liquor	Jan. 9, 1877	357	109	11	64
197,423	Snyder, George T., Natrona, Pa. Road-engine	Nov. 20, 1877	727	{217 218}	12	88
	Snyder, Henry. (*See* Wood & Scull, assignors.)					
187,190	Snyder, Henry, Conway, Mich. Horse-fork hook	Feb. 6, 1877	253	83	11	237
192,795	Snyder, Henry, Fowlersville, Mich. Saw-mill dog	July 3, 1877	239	69	12	44
190,921	Snyder, John H., assignor of one-fourth interest to D. N. Walker, Richmond, Va. Truss-bridge	May 15, 1877	831	246	11	870
193,566	Snyder, John H., Eau Claire, Wis. Wrench	July 24, 1877	1051	315	12	178
194,739	Snyder, John H., and D. W. Henderson, Muskegon, Mich. Buggy-top	Aug. 28, 1877	969	288	12	386
194,934	Snyder, John H., Richmond, Va. Machine for rolling horseshoe-blanks	Sept. 4, 1877	178	55	12	424
190,382	Snyder, Peter, Louisville, Ky. Eave-trough	May 1, 1877	264	78	11	780
	Snyder, Thomas C. (*See* Smith, Henry W., assignor.)					
189,667	Snyder, Warren W., Martinsville, Ohio. Flue-ditcher	Apr. 17, 1877	671	207	11	662
	Suyder, William. (*See* Evans & Snyder.)					
190,790	Snyder, William T., Catasauqua, Pa. Pressure-gage	May 15, 1877	709	210	11	854
	Sober, Morris S. (*See* Woodside, Lewis S., assignor.)					
187,426	Sobinski, Carl O., Saint Louis, Mo. Cradle	Feb. 13, 1877	507	157	11	282
	Sochurek, Frank (*See* Cisar & Sochurek.)					
	Soci'te Douphinot Martinet Desquibbet. (*See* Martin, Jules, assignor.)					
	Soesbe, Samuel W. (*See* Woodcock, Henry R., assignor.)					
196,772	Soger, Georg, Pittsburg, Pa. Counter-shaft pulley	Nov. 6, 1877	34	10	12	765
188,976	Soggs, Nelson A., Columbus, Pa. Button-hole cutter	Mar. 27, 1877	1031	317	11	544
194,459	Sohn, John W., Hamilton, Ohio. Cultivator	Sept. 25, 1877	738	218	12	528
185,872	Solomon, Isaac, Solomon's Island, Md. Spring-motor	Jan. 2, 1877	55	17	11	16
	Solter, John. (*See* Barrow & Solter.)					
191,725	Solter, John, assignor to J. W. Condon, Baltimore, Md. Ice-cream freezer	June 5, 1877	200	63	11	1004

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
196,258	Solvay, Ernest, Brussels, Belgium. Manufacture of hypochlorites of lime and magnesia from their silicates and aluminates	Oct. 16, 1877	604		12	661
196,259	Same.....Apparatus for continuous decantation in the ammonia-soda process	Oct. 16, 1877	604	174	12	661
198,699	Same.....Ammonia-soda manufacture	Dec. 25, 1877	1018	310	12	1118
	Somers, Daniel M. (*See* Rose & Somers.)					
187,238	Somers, Daniel M., New York, N. Y. Pen-holder	Feb. 13, 1877	320	103	11	258
188,721	Same Pocket-pencil	Mar. 20, 1877	760	234	11	498
	Somers, D. M. (*See* Sholes, Frederick, assignor.)					
195,178	Somers, Will. H., assignor of one-half interest to S. L. Dond, Hume, N. Y. Label-holder	Sept. 11, 1877	440	131	12	470
	Somes, Frank. (*See* Fogerty, George F., assignor.)					
192,135	Somes, J. Kirk, assignor to self and L. R. Waite, Springfield, Mass. Bias measure	June 19, 1877	639	195	11	1078
194,114	Somes, John K., assignor to self and L. R. Waite, Springfield, Mass. Machine for rolling dry goods	Aug. 14, 1877	351	105	12	287
188,549	Sommers, Rudolph, Gastonburg, Conn. Toilet washing-powder	Mar. 20, 1877	596		11	476
	Sommerville, William W. (*See* Agnew, John, assignor.)					
186,892	Sondermeyer, Frederick, and F. Schindler, Perryville, Mo. Sack-holder and sack-filler combined	Jan. 30, 1877	1092	338	11	189
190,694	Sone, Louis V., New York, N. Y. Sheet-metal can	Apr. 24, 1877	1135	345	11	730
	Sorg, Paul J. (*See* Wilson, Sorg & Auer.)					
	Soule, Oscar F. (*See* Merrell & Soule.)					
190,256	Southall, Charles H., Leeds, England. Boot-cleaner	May 1, 1877	137	41	11	764
193,622	Same.....Boot and shoe edge burnishing-machine	July 31, 1877	1125	337	12	199
	Southard & Son, T. J. (*See* Southard, Thomas J., assignor.)					
7,838	Southard, Abraham M., Marshalltown, Iowa. Corn-planter.....(Reissue)	Aug. 7, 1877	238	70	12	266
197,501	Southard, Thomas J., assignor to T. J. Southard & Son., Richmond, Me. Windlass and capstan attachment	Nov. 27, 1877	823	245	12	905
	Southward, John. (*See* Cox, William J., assignor.)					
	Southwick, Andrew S. (*See* Vose & Southwick.)					
196,129	Spafford, Noah N., Strongsville, Ohio. Car-coupling	Oct. 16, 1877	473	137	12	643
	Spain, Fletcher M. (*See* Goodrich & Spain.)					
190,922	Spake, Isaiah H. and J. D., Bluffton, Ind. Crimping apparatus for the uppers of boots and shoes	May 15, 1877	831	246	11	871
	Spake, Joseph D. (*See* Spake, Isaiah H. and J. D.)					
196,493	Spang, Henry W., Reading, Pa. Lightning-conductor	Oct. 23, 1877	847	244	12	704
186,694	Spanner, Walter, assignor to B. Merton, Toronto, Canada. Invalid-bedstead	Jan. 30, 1877	897	278	11	163
193,353	Sparhawk, Charles M., Binghamton, N. Y. Pegging-jack	July 24, 1877	841	258	12	150
195,775	Sparkes, James H., Clinton, Ill. Tile-laying machine	Oct. 2, 1877	79	24	12	572
188,430	Sparks, Thomas, Kentontown, Ky. Corn-planter	Mar. 13, 1877	474	146	11	450
7,844	Sparks, William E., New Haven, Conn., assignor, by mesne assignments, to Mallory, Wheeler & Co. Reversible latch.....(Reissue)	Aug. 14, 1877	522	157	12	310
188,311	Sparks, William E., assignor to P. and F. Corbin, New Britain, Conn Combined sash lift and fastener	Mar. 13, 1877	353	111	11	434
189,145	Same.....Sash-fastener	Apr. 3, 1877	115	42	11	575
189,397	Same.....Door-bell	Apr. 10, 1877	394	125	11	618
190,162	Same.....Reversible knob-latch	May 1, 1877	51	14	11	753
190,792	Same.....Closet-latch	May 15, 1877	711	210	11	854
198,704	Same.....Reversible latch	Dec. 25, 1877	1023	311	12	1118
190,923	Sparrow, Thomas F., Denver, Col. Rotary engine	May 15, 1877	832	{246 247}	11	871
	Spaulding, Austin A. (*See* Hart, Albert S., assignor.)					
185,873	Spaulding, George H., assignor of one-half interest to W. A. Knowlton, Rockford, Ill. Harvester	Jan. 2, 1877	57	18	11	16
	Spaulding, Mark H., trustee. (*See* Kneeland, Joseph C., assignor.)					
192,089	Spaulding, Nathan W., San Francisco, Cal. Saw-teeth	June 19, 1877	593	181	11	1072
192,090	Spaulding, Nathan W., Oakland, Cal. Saw-teeth	June 19, 1877	593	181	11	1072
189,808	Spayd, Benjamin F., Philadelphia, Pa. Toy dancer	Apr. 17, 1877	812	250	11	680
190,635	Spear James, Philadelphia, Pa. Stove	May 8, 1877	539	{160 161}	11	825
194,058	Spear, Samuel S., South Weymouth, Mass. Device for operating doors	Aug. 14, 1877	277	82	12	279
194,540	Spear, Warren, Aurora, Ill. Grinding-mill	Aug. 28, 1877	792	{235 236}	12	363
187,566	Spears, Emanuel, La Fayette, Ind. Removable wagon-brake	Feb. 20, 1877	650	202	11	309
188,689	Specht, Edward C., and J. Spicler, Cincinnati, Ohio. Sky-light	Mar. 20, 1877	731	224	11	494
187,565	Speed, Thomas, Louisville, Ky. Chimney-damper	Feb. 20, 1877	650	202	11	308
196,944	Speer, Edward D., Springfield, Ill., assignor to Brookville Paper Company, Brookville, Ind. Millstone-dress	Nov. 6, 1877	215	63	12	790
	Speer, Joe T., *et al.* (*See* Todd, George W., assignor.)					
195,668	Speer, Joe T., Pittsburg, Pa. Plow	Sept. 25, 1877	934	278	12	557
190,793	Spelman, William, Portland, Me. Rowlock	May 15, 1877	711	210	11	854
196,546	Spence, Charles A. and W. T., Cincinnati, Ohio. Tobacco-pouch	Oct. 30, 1877	920	266	12	746
193,427	Spence, James F., assignor to self, C. E. Davis, and R. P. Wilkins, Brooklyn, N. Y. Game apparatus	July 24, 1877	913	277	12	160
	Spence, Norval T. (*See* Spence, Charles A. and N. T.)					
	Spence, William. (*See* DeForest, David W., assignor.)					
	Spencer, Albert E. (*See* Post, Albert E., assignor.)					
	Spencer, Charles A. (*See* Clarke, Almon, assignor.)					
195,669	Spencer, Charles F., Rochester, N. Y. Burial-casket	Sept. 25, 1877	935	279	12	557
189,809	Same.....same	Apr. 17, 1877	812	251	11	680
	Spencer, Elijah E. (*See* Galer & Spencer.)					
194,622	Spencer, George H., Jersey City, N. J. Spring attachment for vehicles	Aug. 28, 1877	661	256	12	373
192,301	Spencer, James H., Philadelphia, Pa. Lemon-squeezer	June 19, 1877	823	250	11	1101
193,567	Spencer, James I., New York, N. Y. Spring bed-bottom	July 24, 1877	1051	315	12	173
	Spencer, John C. (*See* Bierce, William W., assignor.)					
186,022	Spencer, John S., New York, N. Y. Eye-glass	Jan. 9, 1877	213	64	11	45
188,264	Same.....same	Mar. 13, 1877	305	96	11	427
189,511	Same.....same	Apr. 10, 1877	497	157	11	631
188,312	Spencer, Joseph H., Cleveland, Ohio. Fire-escape	Mar. 13, 1877	353	111	11	434
	Spencer, Luke G. (*See* Fairbanks & Spencer.)					
195,861	Spencer, Luther C., and P. Barrett, Rochester, N. Y. Thill-coupling	Oct. 9, 1877	224	80	12	609
7,557	Spencer, Robert, Newark, N. J. Saddle or sweat cloth.....(Reissue)	Mar. 13, 1877	512	157	11	456
198,655	Spencer, Samuel, Turlock, Cal. Harvester	Dec. 11, 1877	349	108	12	1005
193,386	Spendelow, Henry, Buffalo, N. Y. Ozone-generator	July 24, 1877	874	267	12	154

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page
191,381	Spengler, Christian G., Hoboken, N. J. Oil-gas burner	May 29, 1877	1296	392	11	970
197,424	Same.....Carburcting attachment for gas-burners	Nov. 20, 1877	728	218	12	883
193,676	Sperry, Alfred W., Wallingford, assignor of one-half interest to G. F. Henblein, Hartford, Conn. Ale and beer faucet	July 31, 1877	1184	355	12	207
194,881	Sperry, Alfred W., Wallingford, assignor to G. Van Sands and C. W. Clark, Middletown, Conn. Sash-holder	Sept. 4, 1877	123	38	12	417
191,620	Sperry, Charles J., and L. Chandler, New London, Minn. Bee-hive	June 5, 1877	102	31	11	990
191,726	Sperry, Henry C., Sheldon, Iowa, assignor to C. F. and W. C. Butterfield and C. S. Stewart. Reciprocating churn	June 5, 1877	201	63	11	1004
193,192	Spethmann, William, assignor to self and E. Durlach, New York, N. Y. Reed for musical instruments	July 17, 1877	651	198	12	117
197,908	Spickler, John M., Taylor Ridge, Ill. Potato drill and planter	Dec. 4, 1877	201	61	12	975
	Spieler, Joseph. (*See* Specht & Spieler)					
	Spindler, Charles, *et al.* (*See* Fischs, Henry, assignor.)					
194,380	Spinks, James, assignor of one-fourth interest to M. Mundy, Pittsburg, Pa. Furnace-door	Aug. 21, 1877	619	186	12	331
	Spinks, Nelson, *et al.* (*See* Thomas, James, assignor.)					
187,677	Splaun, John, assignor to Osborne & Cheesemau Company, Ansonia, Conn. Buckle	Feb. 20, 1877	758	235	11	323
198,424	Spofford, Charles, assignor to self and J. H. Hoffman, New York, N. Y. Paper-collar machine	Dec. 18, 1877	741	224	12	1069
190,522	Spooner, Charles F., assignor of one-half interest to J. O. Sherman, New Bedford, Mass. Attaching handles to crosscut-saws	May 8, 1877	425	124	11	810
7,602	Spoor, Stephen, Troy, N. Y., assignor to W. M. Spoor, H. M. Russell, S. E. Norton, and Foxell & Jones. Cooking utensil (Reissue)	Apr. 10, 1877	543	169	11	637
	Spoor, William M., *et al.* (*See* Spoor, Stephen, assignor) (Reissue.)					
188,073	Sprague, Austin V. M., assignor of one-half interest to J. E. Jones, Rochester, N. Y. Hand fruit-press	Mar. 6, 1877	111	34	11	395
194,623	Sprague, Barzillai C. and J. T., Clinton, Ill. Churn	Aug. 28, 1877	862	257	12	373
194,935	Sprague, Charlee A., Birmingham, Conn. Hoop-skirt former	Sept. 4, 1877	179	55	12	425
186,023	Sprague, Edwin, Pittsburg, Pa. Bottom board for brick-molds	Jan. 9, 1877	213	65	11	45
186,024	Same.....Cutter for brick-machines	Jan. 9, 1877	214	65	11	45
	Sprague, John T. (*See* Sprague, Barzillai C. and J. T.)					
196,396	Sprague, Mary A., Canfield, Ohio. Milk-pail stool	Oct. 23, 1877	751	217	12	691
	Sprague, Salon S. (*See* Burns, William H., assignor.)					
	Sprague, Thomas S., *et al.* (*See* Leighton, James M., assignor.)					
198,524	Sprague, William H., Cleveland, Ohio. Compound implement	Dec. 25, 1877	852	259	12	1093
189,810	Spraker, James E., Homer, Ill. Extension-table	Apr. 17, 1877	813	251	11	680
	Spreen, Henry C. (*See* Stewart, Edward, assignor.)					
194,624	Sprenkel, Reuben, York, Pa. Grain-separator	Aug. 28, 1877	863	257	12	373
	Sprenkle, Abraham B. (*See* Sprenkle, Peter B. and A. B.)					
191,482	Sprenkle, Peter B. and A. B., York, Pa. Flour-bolting machine	May 29, 1877	1401	420	11	962
	Spring, Amasa. (*See* Tompkins, Rhinelander C., assignor.)					
	Spring, Andrew, *et al.* (*See* Andrews & Tucker, assignors) (Reissue.)					
189,070	Spring, Charles, Hyde Park, and J. T. Robinson, Boston, Mass. Dart for air-guns	Apr. 3, 1877	55	20	11	566
197,572	Spring, John M., assignor to P. and F. Corbin, New Britain, Conn. Bronzing articles of iron	Nov. 27, 1877	896		12	915
187,191	Spring, Louis, Millbury, Mass. Manufacture of blank plane-irons	Feb. 6, 1877	254	83	11	237
	Spring, Samuel E., *et al.* (*See* Andrews & Tucker, assignors) (Reissue.)					
193,193	Springhorn, Herrman, and C. H. Baush, Holyoke, Mass. Cloth-finishing machine	July 17, 1877	652	199	12	117
194,186	Same.....Bed-piece for cloth-pressing machines	Aug. 14, 1877	421	127	12	297
197,571	Same.....Cloth-finishing machine	Nov. 27, 1877	895	267	12	915
187,327	Springer, Alfred, Cincinnati, Ohio. Treating fats	Feb. 13, 1877	413	130	11	270
197,746	Springer, Charles C., Yarmouth, Me. Ice-cutting machine	Dec. 4, 1877	39	13	12	952
196,395	Springer, George H., assignor to L. Prang & Co., Boston, Mass. Machine for perforating paper	Oct. 23, 1877	751	216	12	691
191,188	Springer, Jacob M., Indianapolis, Ind. Pump-piston	May 22, 1877	1106	330	11	915
186,893	Springer, Jason, San Francisco, Cal. Sawing lumber	Jan. 30, 1877	1093	338	11	189
196,494	Springer, Theodore G., Louisville, Ky. Steam-trap	Oct. 23, 1877	849	241	12	704
196,495	Same.....Process and apparatus for the manufacture of gas	Oct. 23, 1877	850	244	12	704
	Sproul, William K. (*See* Sulgrove, Milton M., assignor.)					
195,851	Sprout, Amos B., Picture Rocks, Pa. Fence-post	Oct. 2, 1877	160	45	12	583
193,428	Sprout, A. Rensselaer, Picture Rocks, Pa. Machine for making wooden pins	July 24, 1877	914	278	12	160
188,974	Spruce, James, assignor to Scoville Manufacturing Company, Waterbury, Conn. Key-hole escutcheon	Mar. 27, 1877	1030	317	12	544
188,975	Same.....Hinge	Mar. 27, 1877	1030	317	11	541
192,091	Spruce, James, Waterbury, Conn. Spring hinge	June 19, 1877	594	181	11	1072
195,412	Spurr, Thomas H., and W. Upton, Philadelphia, Pa.; said Upton assignor to said Spurr. Crow-bar	Sept. 18, 1877	677	200	12	512
190,095	Squier, Daniel, assignor of one-half interest to J. Scott, Battle Creek, Mich. Machine for making broom-heads	Apr. 24, 1877	1136	345, 346	11	730
	Squier, George L. (*See* Stevens, Henry B., assignor.)					
188,313	Squire, Edwin, Cleveland, Ohio. Car-brake	Mar. 13, 1877	356	111	11	434
197,197	Squire, Feargus B., Cleveland, Ohio. Apparatus for testing the igniting temperature of hydrocarbon fluids	Nov. 13, 1877	486	144	12	838
198,425	Squire, Feargus B., and C. G. Little, Baltimore, Md. Lamp	Dec. 18, 1877	743	224	12	1069
7,601	Squire, John J., Saint Louis, Mo., assignor, by mesne assignments, to H. E. Towle, New York, N. Y. Register for gas and water meters (Reissue)	Apr. 10, 1877	541	169	11	637
	Squires, John A. (*See* Summers, Alexander B., assignor.)					
193,784	Squires, Myron P., Stonington, Conn. Grinding-mill for soft corn	July 31, 1877	1287	386	12	221
189,583	Stackpole, John, Woburn, Mass. Molding-sand sifter	Apr. 17, 1877	591	183	11	652
190,637	Stadler, Henry A., New York, N. Y. Illuminating apparatus for ovens	May 8, 1877	542	161	11	825
194,008	Same.....Device for opening and closing doors of furnaces, &c	Aug. 7, 1877	211	63	12	263
186,765	Stachlen, William, assignor to C. F. A. Hinrichs, Brooklyn, N. Y. Lamp	Jan. 30, 1877	960	298	11	172, 173
187,926	Stafford, John G., and J. W. Phillips, Washington, D. C. Concrete pavement	Feb. 27, 1877	1028	316	11	367
191,483	Stafford, John G., Washington, D. C. Dumping-wagon	May 29, 1877	1402	423	11	962
191,481	Same.....Excavator	May 29, 1877	1403	423, 424	11	963
	Stafford, Lac. (*See* Stafford, Oscar C., assignor.)					
198,426	Stafford, Nelson, Pamrapo, N. J. Scroll-sawing machine	Dec. 18, 1877	744	225	12	1069
196,496	Stafford, Oscar C., assignor of one-half interest to L. Stafford, Minneapolis, Minn. Elevator-cup	Oct. 23, 1877	851	244	12	704
192,136	Stafford, William H., and S. S. Cook, Woonsocket, R. I. Device for securing and protecting tapes	June 19, 1877	640	195	11	1078

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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188,431	Staker, George W., Monroe, Iowa. Apparatus for rescuing goods from fire	Mar. 13, 1877	475	147	11	450
	Stambaugh, David F. (*See* Steeples, Smith, Boles & Stambaugh.)					
188,432	Stambaugh, David F., and W. A. Smith, Casey, Ill. Sash-balance	Mar. 13, 1877	476	147	11	459
	Stanage, John L. (*See* Baldwin, Frank S., assignor.)					
197,573	Stanard, Gaylord S., assignor to Jewett & Root, Buffalo, N. Y. Panel-fastening for stoves	Nov. 27, 1877	896	267	12	915
194,009	Stanchfield, Daniel, Davenport, Iowa. Cultivator	Aug. 7, 1877	211	63	12	263
	Standiford, M. L. (*See* Standiford, Stuart A., assignor.)					
195,776	Standiford, Stuart A., assignor to M. L. Standiford, Philadelphia, Pa. Buzz toy	Oct. 2, 1877	80	24	12	572
195,053	Standish, Hiram, Joy, Ill. Grain-separator	Sept. 11, 1877	310	94	12	450
	Standish, L. F. (*See* Tyler, Chandler & Standish) (Reissue.)					
7,843	Standish, William L., Pittsburg, Pa. Machine for cutting bungs (Reissue)	Aug. 14, 1877	521	157	12	310
	Stanfield, Mark W., *et al.* (*See* Wood, George W., assignor.)					
192,539	Stangler, John, assignor to A. Eglau, New York, N. Y. Beer-cooler	June 26, 1877	1075	324	11	1146
191,013	Stanley, Edward, Brooklyn, N. Y. Bag-machine	May 22, 1877	946	279, 280	11	893
187,192	Stanley, Elbridge G., Fitchburg, Mass. Thill-coupling	Feb. 6, 1877	255	83	11	237
188,825	Stanley, James C., New Hartford, Conn. Spinning-quill	Mar. 27, 1877	887	269	11	524
	Stanley, Joseph. (*See* Diemer, Peter, assignor.)					
186,505	Stanley, Lucius T., Indianapolis, Ind. Reversible seat	Jan. 23, 1877	708	218	11	128, 129
191,189	Same—Jig-saw	May 22, 1877	1107	331	11	915
	Stanley Rule and Level Company. (*See* Clark, Henry M., assignor.)					
	Same—(*See* Sargent, Samuel D., assignor.)					
187,193	Stanley, William H., Virginia City, Nev. Rifle-box for concentrating ores	Feb. 6, 1877	256	84	11	237
191,190	Stannah, Joseph, Southwark, England. Donkey engine and pump	May 22, 1877	1108	331	11	916
191,382	Stanton, Charles H., Norwich, N. Y. Type-writer	May 29, 1877	1296	393	11	950
198,427	Stanton, David, Waymart, Pa. Engine	Dec. 18, 1877	745	225	12	1069
191,554	Stanton, Gerald N., New York, N. Y. Ribbon-block	June 5, 1877	45	13	11	982
196,051	Stanton, John W., assignor of part interest to G. W. Weart, Philadelphia, Pa., and R. R. Williams, Bridgeport, Ohio. Fountain-pen	Oct. 9, 1877	373	106	12	622
185,978	Staples, Ezra, Rochester, N. H. Dough-kneader	Jan. 2, 1877	164	50	11	30
194,625	Staples, George S., Sherman, Tex. Fire-escape	Aug. 28, 1877	864	257	12	573
194,460	Staples, John H., Boston, Mass. Gate for turbines	Sept. 25, 1877	739	218	12	528
	Star Pin Company. (*See* Bryan, John, assignor.)					
195,852	Starck, Ernst G., Chicago, Ill. Distilling-column	Oct. 2, 1877	161	45	12	583
194,541	Stark, Michael J., assignor to Heinz, Pierce & Munschaner, Buffalo, N. Y. Joint for wire and rod fabrics	Aug. 28, 1877	793	236	12	363
186,961	Starkey, William, assignor of three-fourths interest to H. Pullian, J. S. Cooper, and T. S. Hutchinson, Pittsburg, Pa. Indicator and low-water alarm	Feb. 6, 1877	47	16, 17	11	208
187,925	Starnes, John H., Buncombe County, N. C. Hoe-fastening	Feb. 27, 1877	1028	316	11	366
189,880	Starnes, John H., assignor of one-half interest to J. M. McEntire and W. M. Ownbey, Asheville, N. C. Churn-dasher	Apr. 24, 1877	911	278	11	701
188,265	Starnes, William F., and W. M. Lipe, Macomb, Ill. Sieve	Mar. 13, 1877	305	97	11	427
7,960	Starr, Eli T., assignor to S. S. White, Philadelphia, Pa. Flexible power-conveyor for dental engines (Reissue)	Nov. 20, 1877	762	226	12	888
186,501	Same—Angle attachment for dental engines	Jan. 23, 1877	707	217	11	128
194,850	Same—Dental engine hand-piece	Sept. 11, 1877	93	30	12	413
190,987	Starr, John F., jr., Camden, N. J. Sheet-metal-seaming machine	May 22, 1877	919	272	11	890
187,427	Starr, Nathaniel W., Kingston, N. Y. Sifter	Feb. 13, 1877	507	157	11	282
186,061	Starr, Nicholas, Homer, N. Y. Harrow	Jan. 9, 1877	254	77	11	51
188,977	Starr, William N., Ashland, Ohio. Force-pump	Mar. 27, 1877	1032	317	11	544
190,636	Starrett, Laroy S., Athol, Mass. Wrench	May 8, 1877	540	161	11	825
189,146	Stata, Elias, assignor to M. E. Stata, Cape Vincent, N. Y. Windmill	Apr. 3, 1877	117	42	11	575
	Stata, Mary E. (*See* Stata, Elias, assignor.)					
190,523	States, Christian, and H. I. Cook, Topeka, Kans. Pipe-tongs	May 8, 1877	425	124	11	810
196,052	Stantz, Arthur, New York, N. Y. Wood and coal box	Oct. 9, 1877	374	106	12	622
	St. Clair, Eugene G. (*See* Krelwitz, Edmund F., assignor.)					
197,425	St. Clair, William J., Freeland, Ohio. Harrow	Nov. 20, 1877	729	218	12	883
188,431	Stead, James C., Green Point, N. Y. Packing for piston-rods	Mar. 13, 1877	476	147	11	450
198,428	Stead, James C., Green Point, N. Y. Feed-water heater	Dec. 18, 1877	745	225	12	1070
188,266	Stead, William W., Cleveland, Ohio. Fire-escape	Mar. 13, 1877	306	97	11	428
	Steadman, Enoch. (*See* Harp, William A., assignor.)					
196,716	Steadman, Samuel A., Manchester, Iowa. Horse-collar	Oct. 30, 1877	1082	314	12	742
	Stearns & Foster. (*See* Catlow, Robert, assignor.)					
189,398	Stearns, Edward J., Denton, Md. Fountain-lamp	Apr. 10, 1877	394	125, 126	11	618
7,484	Stearns, George N., Syracuse, N. Y. Hollow auger (Reissue)	Jan. 30, 1877	1127	347	11	193
191,817	Same—same	June 12, 1877	300	93	11	1021
	Stearns, Henry A., *et al.* (*See* Barker, Robert F., assignor.)					
192,882	Stearns, Henry A., Pawtucket, R. I. Gate for railways	July 10, 1877	350	103	12	67
194,312	Same—Gate	Aug. 21, 1877	555	167	12	322
194,383	Same—Railway-gate	Aug. 21, 1877	622	187	12	331
192,304	Stearns, Samuel, and R. R. Ogden; said Ogden assignor to H. F. Peck, Glens Falls, N. Y. Water-wheel	June 19, 1877	826	251	11	1102
	Stearns, William R., *et al.* (*See* Merritt, Henry W., assignor.)					
193,195	Steckel, Calvin T., Brooklyn, N. Y. Folding grating for windows	July 17, 1877	654	200	12	117
192,629	Stedman, Oscar F., Westfield, N. Y. Attachment for oil or gas cook-stoves	July 3, 1877	74	23	12	22
	Stedman, Samuel M. (*See* McCaffrey, John, jr., assignor.)					
	Steel, Alexander, *et al.* (*See* Ball, Richard, assignor.)					
	Same—(*See* Beasley, Charles J., assignor.)					
193,465	Steel, William M., White Day, W. Va. Corn-planter	July 24, 1877	946	288	12	165
185,980	Steele, Elbridge J., New Britain, assignor to O. B. North & Co., New Haven, Conn. Snap-hook	Jan. 2, 1877	165	51	11	30
196,053	Steele, Ferdinand, Brooklyn, N. Y. Steam-ejector	Oct. 9, 1877	375	107	12	622
188,202	Steele, George, New York, N. Y. Feed-water heater	Mar. 6, 1877	241	75	11	412
193,049	Same—Pressure safety attachment for house-boilers	July 10, 1877	506	152	12	89
193,050	Same—Governor for marine engines	July 10, 1877	508	152	12	89
	Steele, William B. (*See* McClintock, William C., assignor.)					
198,317	Steen, Edward T., San Francisco, Cal. Pipe coupling and joint	Dec. 18, 1877	635	193	12	1053
	Steenken, Charles. (*See* Russell & Steenken.)					
185,981	Steeples, Daniel, W. A. Smith, D. Boles, and D. F. Stambaugh, Casey, Ill. Meat-mangler	Jan. 2, 1877	165	51	11	30
188,484	Stegner, Louis M., Harveyville, Kans. Land-roller	Mar. 20, 1877	538	165	11	468

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185,506	Stehley, William M., King William Court-House, Va. Harrow and land-roller combined	Jan. 23, 1877	709	218	11	129
186,962	Steiger, William T., Howard County, Md. Foot-warmer	Feb. 6, 1877	49	17	11	208
8,002	Steigerr, Leopold, Cincinnati, Ohio. Machine for chopping meat (Reissue)	Dec. 18, 1877	768	232	12	1073
192,303	Stein, David J., New York, N. Y. Portfolio-easel	June 19, 1877	825	251	11	1101
198,056	Same.....Writing-desk	Dec. 11, 1877	350	109	12	1006
	Stein Manufacturing Company. (*See* Nirdlinger, Albert H., assignor.)					
186,176	Stein, Mathias, Ypsilanti, Mich. Combined flat-iron heater and coffee-roaster	Jan. 9, 1877	358	109	11	61
190,638	Stein, Samuel, Rochester, N. Y. Show-case	May 8, 1877	543	161	11	825
195,854	Steinhardt, Bernhardt T., New York, N. Y. Gas or lamp fixture	Oct. 2, 1877	163	45	12	584
	Steinhardt, Lesser. (*See* Schweig, George M., assignor.)					
195,514	Steinhauer, George C., San Francisco, Cal. Boot and shoe	Sept. 18, 1877	679	201	12	512
195,962	Steinhoff, Herman C., New York, N. Y. Curtain roller and bracket	Oct. 9, 1877	285	80	12	609
197,181	Steinlein, John, Egg Harbor, N. J., and G. Wright, Pike, N. Y. Embossing-machine for wearing-apparel	Nov. 13, 1877	467	138	12	836
	Steinmann & Co., C. (*See* Steinmann & Metzger, assignors.)					
197,426	Steinmann, Charles, and J. Metzger, assignors to C. Steinmann & Co., Cleveland, Ohio. Tanners' apparatus for handling hides	Nov. 20, 1877	730	218	12	883
190,639	Steinway, Albert, New York, N. Y. Piano-forte attachment	May 8, 1877	544	162	11	825
7,950	Steinway, C. F. Theodore, New York, N. Y., assignor, by mesne assignments, to self and W. Steinway. Piano-action frame (Reissue)	Nov. 13, 1877	500	147, 148	12	840
	Steinway, William. (*See* Steinway, C. F. Theodore, assignor) (Reissue.)					
196,997	Steitz, Augustus, deceased, by J. Steitz, administratrix, Saint Louis, Mo. Apparatus for transferring molten metal	Nov. 13, 1877	278	82	12	808
	Steitz, Josephine, administratrix. (*See* Steitz, Augustus.)					
187,062	Steller, Charles E., Milwaukee, Wis. Toy whirligig	Feb. 6, 1877	138	46	11	221, 222
196,838	Same.....same	Nov. 6, 1877	100	31	12	775
190,924	Ste Marie, Pierre C., Montreal, Canada. Spittoon	May 15, 1877	833	247	11	871
187,195	Stempel, Omar A., Chamois, Mo. Fastener for egg-boxes	Feb. 6, 1877	257	84	11	237
195,179	Same.....Packing eggs for transportation	Sept. 11, 1877	440	131	12	470
186,377	Stenberg, Oscar Zerbst, assignor of one-half interest to G. and F. Sachsenberg, Rosslan, Germany. High-pressure hot-air engine	Jan. 16, 1877	558	177	11	99
196,717	Stengel, Jacob, Andrews Station, Cal. Machine for drilling oil-wells	Oct. 30, 1877	1083	314	12	748
190,726	Stephen, Andrew, Clinton, Iowa. Broom	May 15, 1877	656	194	11	847
	Stephens, John L., *et al.* (*See* Baackes, John M. E., assignor.)					
188,434	Stephens, John R., Lone Star, Miss. Moth-exterminator	Mar. 13, 1877	477	147	11	471
196,718	Stephens, Robert E., Owen Sound, Canada. Gate-latch	Oct. 30, 1877	1083	314	12	748
189,512	Stephens, William, Pittston, Pa. Balanced valve	Apr. 10, 1877	498	157	11	631, 632
190,524	Stephenson, George B., Pittsburg, Pa. Clothes-drier	May 8, 1877	426	125	11	810
190,258	Stephenson, John, New York, N. Y. Car-brake	May 1, 1877	139	41	11	764
190,259	Same.....Car-lamp house	May 1, 1877	140	42	11	764
195,311	Sterling, George, Toledo, Ohio. Hose-coupling for fire-engines	Sept. 18, 1877	585	171	12	498
	Sterling, Henry F. (*See* Hudson, Miller B., assignor.)					
190,383	Sternberg, A. Irving, Carthage, N. Y. Boiler-feeder	May 1, 1877	265	79	11	781
194,381	Sternberg, William H., Wichita, Kans. Folding-chair	Aug. 21, 1877	620	186, 187	12	331
	Sternberger, Leopold. (*See* Pfautz, Daniel M., assignor.)					
189,278	Sternberger, Leopold, Philadelphia, Pa. Wringer	Apr. 3, 1877	251	83	11	591
192,027	Same.....Washing-machine	June 12, 1877	507	155	11	1048
185,979	Sterne, Louis, London, England. Nut-lock	Jan. 2, 1877	164	50	11	30
190,257	Sterns, William H., Humboldt, Nebr. Power-churn	May 1, 1877	138	41	11	764
194,936	Same.....Churn	Sept. 4, 1877	181	55	12	425
	Sterry, Eva M. (*See* Scholfield, Andrew H., assignor.)					
	Sterzing, Fred. (*See* Perry, Elton, assignor.)					
196,262	Stetefeldt, Carl A., San Francisco, Cal. Reducing silver ores	Oct. 16, 1877	607		12	661
191,894	Stetson, George R., assignor to self and Morse Twist Drill Company, New Bedford, Mass. Lathe for cutting screw-taps	June 12, 1877	375	115	11	1031
195,963	Stetson, George R., assignor to self and Morse Twist Drill and Machine Company, New Bedford, Mass. Machine for clearing twist-drills	Oct. 9, 1877	286	80	12	609
	Stetson, Kimball W. (*See* Stetson, Thomas D., assignor.)					
192,468	Stetson, Thomas D., New York, N. Y., assignor to self and K. W. Stetson, Kingston, Mass. Barbed fence-wire	June 26, 1877	998	301	11	1137
	Stevens, Albert C. (*See* Heneage, Robert, assignor.)					
7,781	Stevens, Andrew J., Sacramento, Cal. Piston-packing (Reissue)	July 3, 1877	271	78	12	48
191,380	Same.....Oil and filter cup	May 29, 1877	1295	392	11	950
187,737	Stevens, Ansel, Gorham, Me. Mowing-machine	Feb. 27, 1877	840	261	11	342
7,582	Stevens, Asher B., assignor of one-half interest to Hale & Kilburn Manufacturing Company, Philadelphia, Pa. Chair (Reissue)	Mar. 27, 1877	1081	333	11	550
192,467	Same.....Nursery-chair	June 26, 1877	997	300	11	1136, 1137
191,895	Stevens, Benjamin J., New York, N. Y. Combined counter and lining for boots and shoes	June 12, 1877	376	116	11	1031
189,964	Stevens, Cassius L., and J. Wallace, Pittsburg, Pa. Folding-chair	Apr. 24, 1877	988	302	11	712
	Stevens, Charles H., *et al.* (*See* Boudren, Thomas, assignor) (Reissue.)					
188,550	Stevens, Charles H., assignor of one-half interest to H. D. Huff, Chicago, Ill. Horse-collar	Mar. 20, 1877	596	184	11	476
	Stevens, Edgar M. (*See* Simonds & Stevens.)					
187,063	Stevens, Edgar M., Boston, assignor to A. L. Wood, trustee, Brookline, Mass. Shuttle-spindle	Feb. 6, 1877	139	46	11	222
191,262	Stevens, Francis B., Hoboken, N. J. Boiler-covering	May 29, 1877	1197	359	11	936
7,810	Stevens, Frank M., Concord, N. H., assignor of one-half interest to H. G. Holmes. Spark-arrester (Reissue)	July 24, 1877	1080	323	12	181
7,811	Same.....same (Reissue)	July 24, 1877	1081	323	12	182
194,382	Stevens, Frank M., Concord, N. H., assignor of one-half interest to H. G. Holmes, New York, N. Y. Spark-arrester	Aug. 21, 1877	621	187	12	331
190,452	Stevens, George C., West Townsend, assignor to self and M. E. Stevens, Ayer Junction, Mass. Machine for sawing staves	May 8, 1877	356	103	11	801
	Stevens, George I., *et al.* (*See* Judson & Schenck, assignors) (Reissue.)					
194,461	Stevens, George M., Cambridge, Mass. Bell-striking apparatus	Sept. 25, 1877	739	218	12	528
196,130	Stevens, Hennell, Brazoria, Tex. Soldering-iron	Oct. 16, 1877	474	138	12	643

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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190,453	Stevens, Henry B., assignor to G. L. Squier, Buffalo, N. Y. Apparatus for hulling and polishing coffee	May 8, 1877	357	104	11	801
193,785	Same....Grinding-mill made of metal	July 31, 1877	1288	386, 387	12	222
187,196	Stevens, Henry H., Dudley, Mass. Stove-pipe damper	Feb. 6, 1877	258	84	11	237
189,279	Stevens, Homer S., assignor of one-half interest to J. F. Powell, Waukegan, Ill. Sickle-grinder	Apr. 3, 1877	252	84	11	591
189,513	Stevens, James C., Pleasant Hill, La. Cultivator	Apr. 10, 1877	498	157	11	632
	Stevens, James N., *et al.* (*See* Wilson, William H., assignor.)					
191,260	Stevens, La Fayette, Elmira, N. Y. Animal-trap	May 29, 1877	1195	359	11	936
196,714	Stevens, Levi, Washington, D. C. Coking coal and desulphurizing the coke	Oct. 30, 1877	1089	313	12	748
	Stevens, Mary E. (*See* Stevens, George C., assignor.)					
192,302	Stevens, Melville, East Gloucester, Mass. Peak-bolt for masts	June 19, 1877	824	251	11	1101
197,678	Stevens, Richard W., Alton, Ill., assignor of one-third interest to G. R. Moore, Saint Louis, Mo. Letter sheet and envelope combined	Nov. 27, 1877	998	298	12	930
187,927	Stevens, Samuel, Alleyton, Mich. Detachable sink	Feb. 27, 1877	1029	317	11	367
189,963	Stevens, Samuel, Boston, Mass. Tooth-brush	Apr. 24, 1877	987	302	11	712
190,791	Stevens, Thomas, Cameron, Mo. End-board for wagons	May 15, 1877	710	210	11	854
196,945	Stevens, William H., Cold Water, Mich. Wheelbarrow	Nov. 6, 1877	215	64	12	790
191,261	Stevens, William J., New York, N. Y. Air or vacuum brake	May 29, 1877	1196	359	11	936
186,378	Stevens, William W., assignor to Westbrook Britannia Company, Portland, Me. Coffee-pot	Jan. 16, 1877	579	177	11	99
195,312	Stevenson, Adolphus W., Xenia, Ohio. Horse hay-rake	Sept. 18, 1877	585	171	12	498
187,194	Stevenson, Charles, Philadelphia, Pa. Washing-machine	Feb. 6, 1877	257	84	11	237
196,261	Stevenson, Charles C., Gold Hill, Nev. Feeder for stamp-mills	Oct. 16, 1877	606	174	12	661
	Stevenson, George. (*See* Boyle, James E., assignor.)					
186,634	Stevenson, George, Zionsville, Ind. Revolving-cultivator	Jan. 23, 1877	833	257	11	145
198,318	Stevenson, Holland N., Cambridge, N. Y., and H. C. Swan, Washington, D. C. Car-coupling	Dec. 18, 1877	636	194	12	1054
197,059	Stevenson, Thomas F., Brooklyn, N. Y. Fire-escape	Nov. 13, 1877	342	101	12	817
	Stevenson, Walker C. (*See* Cummings, Seton S., assignor.)					
	Steward, John F. (*See* Gammon, Dixon & Steward.)					
191,263	Steward, John F., Plano, Ill. Barbed wire-fence	May 29, 1877	1198	359	11	936
191,264	Steward, John F., Plano, assignor to E. H. Gammon and W. Deering, Chicago, Ill. Grain-binder	May 29, 1877	1199	360	11	936
192,603	Same....same	July 3, 1877	47	14	12	19
194,978	Same....same	Sept. 11, 1877	230	71	12	439
195,413	Steward, John F., assignor to E. H. Gammoon and W. Deering, Plano, Ill. Grain-binder.	Sept. 18, 1877	677	201	12	512
197,499	Steward, John F., Plano, assignor to E. H. Gammon and W. Deering, Chicago, Ill. Harvester	Nov. 27, 1877	821	245	12	905
197,500	Same....same	Nov. 27, 1877	822	245	12	905
190,988	Stewart, Alexander, and L. Von Hoven, Philadelphia, Pa. Check-register	May 22, 1877	921	272	11	890
186,894	Stewart, Alexander W., Boston, assignor to J. J. Haley, Newton, and H. C. Morse, Boston, Mass. Carpet-sweeper	Jan. 30, 1877	1094	338	11	189
186,895	Stewart, Alexander W., Boston, Mass. Carpet-sweeper	Jan. 30, 1877	1094	339	11	189
191,191	Stewart, Arthur, assignor to self and W. H. Mattson, Philadelphia, Pa. Face-plate for locks	May 22, 1877	1108	331	11	916
192,092	Stewart, Charles, Worcester, Mass. Heating-furnace	June 19, 1877	595	181, 182	11	1072
188,826	Stewart, Charles H., assignor to D. Hays, Johnstown, N. Y. Knob-latch	Mar. 27, 1877	887	270	11	524
188,827	Same....Key for locks	Mar. 27, 1877	888	270	11	524
	Stewart, Charles S., *et al.* (*See* Sperry, Henry C., assignor.)					
	Stewart, Daniel. (*See* Carter, Henry, assignor.)					
189,280	Stewart, Edward, Fort Madison, Iowa. Heating-stove	Apr. 3, 1877	254	84	11	592
194,010	Stewart, Edward, assignor of one-half interest to H. C. Spreen, Madison, Iowa. Beer-pump	Aug. 7, 1877	213	63	12	263
187,328	Stewart, Edward D., Wheatland, Cal. Harvester	Feb. 13, 1877	414	130	11	270
	Stewart, E. J. (*See* Harvey, Lorenzo D., assignor.)					
185,874	Stewart, Frank L., Charleston, Me. Car-coupling	Jan. 2, 1877	59	18	11	16
196,497	Stewart, Frank L., assignor of one-half interest to J. Foss, Charleston, Me. Foot-warmer	Oct. 23, 1877	852	245	12	704
195,543	Stewart, Frederick, assignor to self and O. F. Scudder, Saint Louis, Mo. Hose-coupling.	Sept. 25, 1877	814	241	12	539
	Stewart, George, *et al.* (*See* Mack, David, assignor.)					
	Stewart, Hugh G., *et al.* (*See* Harrington, Samuel H., assignor.)					
198,429	Stewart, James, Pittsburg, Pa. Turbine-wheel	Dec. 18, 1877	746		12	1070
196,260	Stewart, John L., Ellicott City, Md. Stopper-fastener	Oct. 16, 1877	605	174	12	661
	Stewart, John W. (*See* Bowden & Stewart.)					
186,376	Stewart, John W., San Francisco, Cal. Refrigerator	Jan. 16, 1877	577	177	11	98
191,893	Stewart, Joseph I., Boston, Mass. Desk	June 12, 1877	373	115	11	1030
191,192	Stewart, Lorenzo, Schenectady, N. Y. Wire bale-tie	May 22, 1877	1109	331	11	916
187,990	Stewart, Lyman, Titusville, Pa. Packer for petroleum-wells	Mar. 6, 1877	34	9	11	385
190,989	Stewart, Richard W., Boston, Mass. Finger-nail cutter	May 22, 1877	922	272	11	890
193,194	Stewart, Robert G., Augusta, Ga. Bale-tie	July 17, 1877	653	194	12	117
	Stewart, Robert J. (*See* Stewart & Makepeace.)					
192,137	Stewart, Samuel M., New Harrisburg, assignor of one-half interest to J. M. Perdue and N. F. Faas, Minerva, Ohio. Shuttle-driving mechanism for sewing-machines	June 19, 1877	640	196	11	1078
196,715	Stewart, Samuel M., New Harrisburg, Ohio. Door-sill	Oct. 30, 1877	1081	314	12	748
195,670	Stewart, Sylvester N., Philadelphia, Pa. Adjustable closet for rooms	Sept. 25, 1877	935	279	12	557
	Stewart, Thomas G., *et al.* (*See* Warner, John P., assignor.)					
189,965	Stewart, Thomas R., Corinth, Ill. Grinding-machine	Apr. 24, 1877	989	302	11	712
190,163	Stewart, Thomas S., Philadelphia, Pa. Gas-generator	May 1, 1877	52	14, 15	11	753
	Stewart, William, *et al.* (*See* Wood, George H., assignor.)					
193,048	Stewart, William and R. J., and C. W. Makepeace, Paterson, N. J. Hydrocarbon-burner	July 10, 1877	505	152	12	89
195,853	Stewart, William D., New York, N. Y. Discharging sewer-gas from traps	Oct. 2, 1877	162	45	12	584
192,198	Stewart, William E., Xenia, Ohio. Tire-heater	June 19, 1877	703	216	11	1086
188,690	Stibbs, Henry, Baltimore, Md. Engine-gearing	Mar. 20, 1877	731	224	11	494
185,984	Stichbury, Frederick, Leyton, assignor to McBryde & Orr, London, England. Heating-box irons	Jan. 2, 1877	168	52	11	31
190,164	Stickney, Stephen W., assignor of one-fourth interest to Pratt & Letchworth, Buffalo, N. Y. Check-hook for harness	May 1, 1877	58	15	11	753
186,896	Stieneker, Rudolph W., Evansville, Ind., assignor of one-half interest to E. C. Marsh and W. B. Brown, Washington, D. C. Clay-picking machine	Jan. 30, 1877	1095	339	11	189

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
192,796	Stiff, William C., and A. Bowen, Birmingham, England. Machine for the manufacture of screws	July 3, 1877	240	70	12	44
194,462	Stiles, Elizabeth W., Philadelphia, Pa. Inkstand	Sept. 25, 1877	740	218	12	528
195,415	Still, Henry C. and J. R., Austin, Tex. Saddle-tree	Sept. 18, 1877	679	201	12	512
	Still, Joseph R. (*See* Still, Henry C. and J. R.)					
	Stillings, Ephraim B., *et al.* (*See* O'Neill, Charles Z., assignor.)					
187,781	Stillman, Ellicott R., Burr Oak, Mich. Car-starter	Feb. 27, 1877	883	275	11	348
192,949	Stillman, Sanford P., Westerly, R. I. Fifth-wheel	July 10, 1877	411	123	12	77
195,855	Stilwell, Edwin R., Dayton, Ohio. Turbine water-wheel	Oct. 2, 1877	164	46	12	584
195,964	Stimpson, Charles W., jr., Thomaston, Me. Car-coupling	Oct. 9, 1877	287	80	12	609
189,514	Stimpson, James, Baldwinsville, Mass. Street and park lamp	Apr. 10, 1877	499	138	11	632
187,678	Stimson, Ashbel A., and C. T. Sabin, Montpelier, Vt. Door-spring	Feb. 20, 1877	759	235	11	323
192,305	Same.....Double-acting hinge	June 19, 1877	826	251	11	1102
	Stine, Frederick A. (*See* Dimmick & Stine.)					
	Same.....(*See* Dimmick, Jacob K., assignor.)					
	Stineman, William H. H. (*See* Holloway & Stineman.)					
186,379	Stineman, William H. H., and C. T. Halloway, Baltimore, Md. Velocipede	Jan. 16, 1877	580	177	11	99
198,430	Stineman, William H. H., Baltimore, Md. Lamp	Dec. 18, 1877	747	226	12	1070
194,565	Stingley, John B., and H. Nelson, Montgomery County, Ind. Windmill	Aug. 28, 1877	813	242	12	366
	Stinnett, Henry C. (*See* Snead & Stinnett.)					
194,115	Stirckler, Albert E., Worcester, Mass. Machine for trimming and burnishing the heels of boots and shoes	Aug. 14, 1877	353	105	12	287
195,544	Stitzer, Henry M., Cochranton, Pa. Stump-puller	Sept. 25, 1877	815	242	12	539
185,982	Stiveson, Anthony O., Apollo, assignor of one-half interest to J. Cooper, Spring Church, Armstrong County, Pa. Harrow	Jan. 2, 1877	166	51	11	30
196,397	St. John, Bela, Wolcottville, Conn. Plate for artificial teeth	Oct. 23, 1877	752	217	12	691
191,485	St. John, Garland B., Cedar Rapids, Iowa. Fence-post	May 29, 1877	1404	424	11	963
195,671	St. John, Herbert J., Cedar Rapids, Iowa. Fence-post	Sept. 25, 1877	936	279	12	557
7,615	St. John, Roswell H., Springfield, Ohio. Sewing-machine shuttle (Reissue)	Apr. 17, 1877	846	260	11	685
187,929	Same.....Pulley and shaft connection	Feb. 27, 1877	1031	317	11	367
188,978	Same.....Adjustable tap-wrench	Mar. 27, 1877	1033	318	11	514
190,925	Same.....Sewing-machine shuttle	May 15, 1877	834	247	11	871
191,193	Same.....Shuttle-lever for sewing-machines	May 22, 1877	1110	332	11	916
188,435	St. John, Spencer H., Cedar Rapids, Iowa. Iron fence-post	Mar. 13, 1877	478	148	11	451
197,060	St. John, Stephen, Port Jervis, N. Y. Bougie	Nov. 13, 1877	342	101	12	817
187,928	St. John, William A., W. M. Robinson, and J. Shepard, Carmi, Ill. Pipe-tongs	Feb. 27, 1877	1030	317	11	367
190,926	St. John, William H., New York, N. Y. Manufacture of iron	May 15, 1877	835	247	11	871
	St. Louis Stamping Company. (*See* Neldringhause, Frederick G. and W. F., assignors.)					
189,517	Stockder, Charles E., assignor to W. H. Maguire, West Meriden, and L. C. Whitney, South Meriden, Conn. Moistening-pad	Apr. 10, 1877	502	159	11	632
	Stocker, Matthew S. (*See* Thorn, Theodore, assignor.)					
195,180	Stockham, Jerome B., Jackson, Mich. Cutter-head	Sept. 11, 1877	441	131	12	470
193,786	Stocking, Zalmon S., Cleveland, and D. Lippy, Mansfield, Ohio. Clover thrashing and hulling machine	July 31, 1877	1289	387	12	222
	Stockwell, Emory. (*See* Towne & Stockwell.)					
185,983	Stockwell, Emory, assignor to Yale Lock Manufacturing Company, Stamford, Conn. Time-lock	Jan. 2, 1877	167	51, 52	11	30
186,177	Same.....same	Jan. 9, 1877	359	110	11	64
186,025	Stoddard, E. Fowler, Dayton, Ohio. Horse hay-rake	Jan. 9, 1877	214	65, 66	11	46
198,319	Same.....Spring-hoe for grain-drills	Dec. 18, 1877	638	194	12	1054
198,320	Same.....same	Dec. 18, 1877	639	194	12	1054
	Stoddard, Mitchel. (*See* Harrington & Stoddard.)					
190,640	Stoddard, William O., New York, N. Y. Desiccating eggs	May 8, 1877	545	162	11	826
190,927	Stoddard, William O., New York, N. Y., and H. Flint, Saint Louis, Mo. Apparatus for desiccating eggs	May 15, 1877	837	248	11	871
	Stoetzel, Charles. (*See* Seivert, Dietzen & Stoetzel.)					
191,897	Stohlmann, Frederick A., Brooklyn, N. Y. Thermometer	June 12, 1877	377	116	11	1031
	Stoker, John H. (*See* Weber, Jacob, assignor.)					
194,313	Stokes, Frederick U., Urbana, Ohio. Corn-planter and fertilizer-distributer	Aug. 21, 1877	556	168	12	322
197,296	Stokes, Russell T., Garnett, Kans. Windlass water-elevator	Nov. 20, 1877	597	177	12	863
186,635	Stokes, William C., Grass Valley, Cal. Bottle-protector	Jan. 23, 1877	834	258	11	146
186,766	Stokesbury, Jesse G. and J. H., Millersburg, Iowa. Corn-planter	Jan. 30, 1877	962	299	11	173
	Stokesbury, John H. (*See* Stokesbury, Jesse G. and J. H.)					
192,540	Stoll, Abram J., Mechanicsville, Iowa. Rotary churn	June 26, 1877	1075	325	11	1146
186,636	Stoll, Charles, Brooklyn, N. Y. Attachment to malt-crushers	Jan. 23, 1877	834	258	11	146
192,093	Stolp, Myron G., Aurora, Ill. Circle-dividing instrument	June 19, 1877	596	182	11	1073
	Stolzembach, Henry J. (*See* Eddy & Stolzembach.)					
196,719	Stone, Anson K., Pine Island, Minn. Vehicle-axle	Oct. 30, 1877	1084	315	12	748
	Stone, Byron A., *et al.* (*See* Read, Waterman J., assignor.)					
195,777	Stone, Charles, assignor of one-half interest to J. W. Meek, Columbus, Ohio. Halter	Oct. 2, 1877	80	24	12	572
191,896	Stone, Charles E., Salisbury Mills, Mass. Wagon-seat lock	June 12, 1877	377	116	11	1031
193,042	Stone, Eaton, Franklin, N. J. Lamp-trimmer	July 10, 1877	510	153	12	89
193,053	Same.....same	July 10, 1877	510	153	12	89
190,166	Stone, Festus T., Greenfield, Wis. Tire-tightener	May 1, 1877	60	16	11	754
186,695	Stone, Jeremiah R., Graham, Mo. Pad-skirt loop for harness	Jan. 30, 1877	898	278	11	163
	Stone, Joseph H., *et al.* (*See* McGovern, Peter, assignor.)					
	Same.....(*See* Parkhurst, W. B., assignor.)					
	Same.....(*See* Stone, Joseph M., assignor.)					
	Stone, Joseph M., *et al* (*See* McGovern, Peter, assignor.)					
	Same.....(*See* Parkhurst, W. B., assignor.)					
185,840	Stone, Joseph M., North Andover, Mass. Hanger for shafting	Jan. 2, 1877	26	9	11	12
195,906	Stone, Joseph M., assignor to self, G. L. Davis, J. A. Wiley, G. G. Davis, J. H. Stone, and J. H. Davis, North Andover, Mass. Cop-building mechanism for spinning machinery	Oct. 9, 1877	225	64	12	601
	Stone, Oren. (*See* Perry, Oliver, assignor.)					
189,516	Stone, Oren, assignor of one-half interest to O. Perry, Flint, Mich. Seeder and fertilizer	Apr. 10, 1877	501	159	11	632
	Stone, Ralph E. (*See* Fitzgibbons, Patrick, assignor.)					
189,515	Stone, Robert, Coventry, England. Gimp-loom	Apr. 10, 1877	500	158	11	632
	Stone, Truman, *et al.* (*See* Kast, Joseph, assignor.)					
187,930	Stone, William, assignor to self and W. Taylor, Boston, Mass. Preserving meat	Feb. 27, 1877	1031		11	367
187,493	Stone, William S., assignor of two-thirds interest to English & Dixon, New Philadelphia, Ohio. Mower	Feb. 20, 1877	588	182	11	300
	Stoneburner, Fred. W. (*See* Kagey & Stoneburner.)					
	Stoneham, James T. (*See* Turner & Stoneham.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
190,260	Stoner, Benjamin F., Rockford, Ill. Gage	May 1, 1877	144	42	11	765
	Stoops, Nesbitt D. (*See* Cushman, Cyrus S., assignor.)					
197,679	Stoops, Nesbitt D., and C. S. Cushman, Philadelphia, Pa.; said Cushman assignor to said Stoops. Sewing-machine	Nov. 27, 1877	999	299	12	931
198,705	Stoops, Nesbitt D., Philadelphia, Pa. Connecting the needle-operating levers to the needle-bars of sewing-machines	Dec. 25, 1877	1024	312	12	1118
	Storey, Horace C. (*See* Hart, Alfred, assignor.)					
193,287	Storle, Ole O., assignor of one-third interest to J. G. Flint, jr., Milwaukee, Wis. Grain-binder	July 17, 1877	759	234	12	131
192,541	Storm, Garry, assignor to self and J. M. Benedict, Portland, Mich. Cultivator	June 26, 1877	1076	325	11	1146
190,165	Storm, James H., Mitchellville, Iowa. Plow-cleaning attachment	May 1, 1877	59	15	11	753
196,373	Storm, William M., New York, N. Y. Apparatus for aging liquors	Oct. 23, 1877	729	210	12	688
189,812	Stossmeister, Albert W., Cincinnati, Ohio, assignor to self and F. W. Kamping. Molding-machine	Apr. 17, 1877	815	252	11	681
188,203	Stott, Asa J., Philadelphia, Pa., assignor of one-half interest to J. Fletcher, Manchester, England. Hydraulic engine	Mar. 6, 1877	242	76	11	412
194,481	Stotts, David C., Savannah, Mo. Balanced steam-valve	Aug. 21, 1877	726	216	12	345
187,679	Stouffer, Hiram C., Canfield, assignor of one-half interest to L. T. Foster, Youngstown, Ohio. Nut-lock	Feb. 20, 1877	760	236	11	323
190,384	Stouffer, Hiram C., Canfield, assignor of one part interest to L. T. Foster and U. A. Andrews, Youngstown, Ohio. Hay-elevator	May 1, 1877	267	79	11	781
190,641	Stouffer, Hiram C., Canfield, assignor of part interest to C. H. Andrews, L. T. Foster, and U. A. Andrews, Youngstown, Ohio. Bale-tie	May 8, 1877	547	162	11	826
190,642	Same.....Crimping-tool for fastening bale-ties	May 8, 1877	548	163	11	826
186,898	Stout, Stephen, assignor of one-third interest to W. C. Kilgore, Cedar Grove, Ga. Animal-trap	Jan. 30, 1877	1097	340	11	189
194,742	Stout, Stephen, Tremont, Ill. Tire-tightener	Aug. 28, 1877	978	290	12	389
188,436	Stover, Daniel C., Freeport, Ill. Wire-barbing machine	Mar. 13, 1877	478	148 149	11	451
190,167	Same.....Barbed fence-wire	May 1, 1877	69	16	11	754
193,354	Same.....Windmill	July 24, 1877	842	258	12	150
196,313	Same.....Wire-barbing machine	Oct. 23, 1877	671	194	12	680
196,498	Stover, William, Auburn, N. Y. Churn	Oct. 23, 1877	852	245	12	704
196,103	Stow, Enos E., Plantsville, assignor to Peck, Stow & Wilcox Company. Southington, Conn. Fire-iron holder	Oct. 16, 1877	440	128 129	12	639
	Stow, Henry M. (*See* Stow, William H. and H. M.)					
191,194	Stow, Henry M., San Francisco, Cal. Wood pavement	May 22, 1877	1110	332	11	916
193,051	Same.....same	July 10, 1877	509	152	12	89
193,291	Stow, William H., Chicago, Ill., and H. M. Stow, San Francisco, Cal. Street-railway	July 17, 1877	763	235	12	131
	Stowe, Aaron F. (*See* Pottes, Moses M., assignor.)					
7,760	Stowe, Aaron F., Worcester, Mass. Strap-machine.....(Reissue)	June 19, 1877	857	259	11	1106
198,473	Same.....Leather-rolling machine	Dec. 25, 1877	802	272	12	1087
194,740	Stowe, Benjamin L., assignor to J. V. Reed, New York, N. Y. Circular loom	Aug. 28, 1877	970	288 289	12	388
194,741	Same.....same	Aug. 28, 1877	974	289 290	12	388
	Stowell, John M. (*See* Cunningham, Albert, assignor.)					
196,398	Stoy, Cyrus S., Butler, Ind. Gasket	Oct. 23, 1877	753	217	12	691
	St. Paul Harvester Works. (*See* Elward, John H., assignor.)					
185,986	Strachan, James, Goderich, Ontario, Canada. Boat-launching apparatus	Jan. 2, 1877	170	52	11	31
	Strahan, Hodgson & Co. (*See* House, Elijah S., assignor.)					
195,965	Straight, Clarence H., Bryan, Ohio. Vault-cover and railing	Oct. 9, 1877	288	81	12	609
188,979	Strand, August B., assignor of one-half interest to L. Thoen, Chicago, Ill. Water-wheel	Mar. 27, 1877	1033	318	11	544
186,381	Strandgaard, Sidney, Buffalo, N. Y. Ticket-case	Jan. 16, 1877	583	178	11	99
	Strasburger, Pfeiffer & Co. (*See* Schwippl, John, assignor.)					
190,168	Strater, Herman, jr., Boston, Mass. Gutter and moulding	May 1, 1877	61	16	11	754
	Stratton, Charles J. (*See* Boyden, Perdon, assignor.)					
196,946	Stratton, James, assignor to O. Conrad, Philadelphia, Pa. Carbureter	Nov. 6, 1877	216	64	12	790
186,440	Straub, Ambrose W., Philadelphia, Pa. Grinding-mill	Jan. 23, 1877	654	201	11	121
185,985	Straus, Jacob, Saint Louis, Mo. Bridle and halter	Jan. 2, 1877	170	52	11	31
	Strauss, Philip L. (*See* Weber, Theodore A., assignor.)					
	Straw Sewing-Machine Company. (*See* Bosworth, Charles F., assignor) .(Reissue.)					
	Same.....(*See* Crosby, Chauncey O., assignor).....(Reissue.)					
7,915	Stray, Michael L. and O. A., Euclid, Ohio. Fruit-basket.....(Reissue)	Oct. 16, 1877	633	182	12	665
	Stray, Orrin A. (*See* Stray, Michael L. and O. A.)(Reissue.)					
	Street, William P. (*See* Whittaker, James W., assignor.)					
195,672	Streit, Anton, assignor to J. A. Fay & Co., Cincinnati, Ohio. Pulley for machine-belts.	Sept. 25, 1877	937	279	12	557
189,071	Streit, Charles, Cincinnati, Ohio. Stove-pipe wall-thimble	Apr. 3, 1877	56	21	11	566
196,720	Stribley, George, Cincinnati, Ohio. Seam for boots and shoes	Oct. 30, 1877	1085	315	12	748
193,733	Stribling, Jesse C., Pendleton, S. C. Fruit-picker	July 31, 1877	1232	369	12	214
192,306	Stribling, Uriah B., assignor to self and I. N. Todd, Madison, Ind. Cupola-furnace	June 19, 1877	827	252	11	1162
	Strickland, Daniel W. (*See* Root & Strickland.)					
185,841	Striedinger, Julius H., New York, and A. Doerflinger, Brooklyn, N. Y. Multiple circuit-closer for electric circuits	Jan. 2, 1877	27	9	11	12
188,980	Striewig, Henry, York, Pa. Corn-planter	Mar. 27, 1877	1035	318	11	544
197,232	Strifler, Daniel O., Saint Louis, Mo. Fire-escape	Nov. 20, 1877	537	159	12	854
196,773	Stripe, Hiram, Greentown, Ohio. Roofing-tile	Nov. 6, 1877	35	10	12	766
188,981	Strobel, Charles, Philadelphia, Pa. Pattern-chain for looms	Mar. 27, 1877	1036	318	11	541
195,416	Strobel, Frederick, and C. M. Idleman, Marion, Ohio. Circular-saw mill	Sept. 18, 1877	680	201	12	512
7,583	Strobridge, Turner, New Brighton, Pa. Coffee-mill.....(Reissue)	Mar. 27, 1877	1082	333	11	570
189,282	Same.....Tool-holder	Apr. 3, 1877	256	85	11	592
189,281	Stroh, Abraham, assignor to C. Albright and W. H. Stroh, Mauch Chunk, Pa. Grate-bar	Apr. 3, 1877	255	84	11	592
189,584	Stroh, Henry, Edwardsville, Ill. Armature for electro-magnets	Apr. 17, 1877	593	183	11	652
	Stroh, William H., *et al.* (*See* Stroh, Abraham, assignor.)					
195,181	Strohm, Samuel D., Philadelphia, Pa. Pipe-cleaning tool	Sept. 11, 1877	442	132	12	470
191,783	Stromberg, Christian G., Chicago, Ill. Druggists' prescription-file	June 12, 1877	266	83	11	1017
	Strong, Aurelia S. (*See* Harrold & Satterlee, assignors.)					
189,283	Strong, George M., Boston, Mass. Bridle	Apr. 3, 1877	256	85	11	592
194,314	Strong, George S., Springfield, Ohio. Windmill	Aug. 21, 1877	558	168	12	322
186,380	Strong, James C., Buffalo, N. Y. Registering fare-box	Jan. 16, 1877	581	178	11	99
198,472	Strong, Levi C., Friendship, and O. S. Garretson, Buffalo, N. Y. Mitering-machine	Dec. 25, 1877	801	243	12	1086

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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191,082	Strong, Myron H., assignor to L. W. Serrell, trustee, S. Cornell, H. M. Pierson, and W. E. Lawton, Brooklyn, N. Y. Manufacture of gas	May 22, 1877	1007	300	11	902
197,061	Strong, Myron H., Brooklyn, N. Y., assignor to L. W. Serrell, trustee. Process and apparatus for manufacturing gas	Nov. 13, 1877	343	101	12	817
197,062	Same.....same	Nov. 13, 1877	344	102	12	817
	Strong, Pitt W. (*See* Lafayette & Strong.)					
187,064	Stroop, Moses, Peru, Ind. Cutting attachment for sewing-machines	Feb. 6, 1877	140	46	11	222
188,551	Strothman, John H., Minneapolis, Minn. Curtain-fixture	Mar. 20, 1877	597	184	11	476
188,081	Stroud, Ezra, Riceford, Minn. Combined collar and hame	Mar. 6, 1877	116	35	11	396
	Stroud, James. (*See* Jones & Stroud.)					
	Strouse, Bernhard, *et al.* (*See* Blackburn & Moeslein, assignors.)					
	Strouse, Henry L, *et al.* (*See* Blackburn & Moeslein, assignors.)					
188,314	Strubel, John, Green Point, N. Y. Pulley-block	Mar. 13, 1877	357	112	11	431
191,486	Strunk, Daniel, assignor to Harris Manufacturing Company, Janesville, Wis. Harvester	May 29, 1877	1405	424	11	963
191,487	Same.....Seeding-machine	May 29, 1877	1407	425	11	963
191,902	St. Tonge, John, assignor of one-half interest to J. St. Tonge, Williamstown, Mass. Washing-machine	June 12, 1877	381	118	11	1031
	St. Tonge, Joseph. (*See* St. Tonge, John, assignor.)					
197,630	Stuart, David, and L. Bridge, assignors to D. Stuart and R. Peterson, Philadelphia, Pa. Heating-stove	Nov. 27, 1877	1001	299	12	931
198,431	Stuart, David, assignor to self and R. Peterson, Philadelphia, Pa. Cooking-stove	Dec. 18, 1877	748	226	12	1070
190,928	Stuart, David J., Brooklyn, assignor of one-half interest to P. McGill, Williamsburg, N. Y. Ice-floor for refrigerators	May 15, 1877	838	248	11	871
188,692	Stuart, John J., New York, N. Y. Pump	Mar. 20, 1877	734	225	11	494
196,264	Stuart, Sarah L., Greenfield, Ind. Churn	Oct. 16, 1877	609	175	12	662
191,383	Stuart, Thomas, San Francisco, Cal. Sash-fastener	May 29, 1877	1297	393	11	950
	Stubs, Jesse, *et al.* (*See* Schulz, Friedrich W., assignor).....(Reissue.)					
186,065	Studer, Philip, Mechanicsville, Iowa. Cultivator	Jan. 9, 1877	255	77	11	51
196,263	Stukenborg, Benjamin J., and J. Bell, Cincinnati, Ohio. Railway-switch	Oct. 16, 1877	608	175	12	662
189,328	Stump, John H., Baltimore, Md. Hose-nozzle	Apr. 10, 1877	331	105	11	609
196,265	Same.....Combined grass-cutter and rake	Oct. 16, 1877	610	175	12	662
198,164	Stumpf, Caspar V., New York, N. Y. Sofa-bedstead	Dec. 11, 1877	463	145	12	1021
197,574	Stuntz, Chauncey R., Hamilton County, Ohio. Composition for producing sulphureted hydrogen	Nov. 27, 1877	897		12	915
192,469	Sturdy, John L., and J. A. May, Goderich, Canada. Smelting-furnace	June 26, 1877	1000	301	11	1157
196,314	Sturdy, William A., Norton, Mass. Metallic tassel for jewelry	Oct. 23, 1877	673	194	12	630
	Sturges, George. (*See* Imlay, William L., assignor.)					
197,681	Sturmberg, Carl W., Elberfeld, Prussia. Wire belting	Nov. 27, 1877	1002	299	12	931
189,881	Sturtevant, Benjamin F., Boston, Mass. Journal-box	Apr. 24, 1877	911	278	11	702
195,182	Same.....Exhaust-fan or blower	Sept. 11, 1877	442	132	12	470
196,998	Same.....Fan-blower	Nov. 13, 1877	279	82	12	803
	Sturtevant, Thomas L. (*See* Bowker & Sturtevant.)					
187,931	Stut, John C. H., San Francisco, Cal. Valve-gear for steam-engines	Feb. 27, 1877	1032	317	11	367
187,567	Stuttle, Henry, Batavia, Ill. Coffee-mill	Feb. 20, 1877	651	203	11	309
188,691	Stutz, Sebastian, Pittsburg, Pa. Coal-washing machine	Mar. 20, 1877	732	224	11	494
194,059	Same.....Ore-jigger	Aug. 14, 1877	278	83	12	279
194,060	Same.....same	Aug. 14, 1877	279	83	12	279
198,432	Same.....Ore-separator	Dec. 18, 1877	749	226	12	1070
	Stutzman, Aaron D. (*See* Deardorff & Stutzman.)					
192,307	Stutzman, David, Ligonier, Ind. Fruit-drier	June 19, 1877	828	252	11	1102
	Stutzman, Joseph W. (*See* Deardorff & Stutzman.)					
185,842	Sabera, Harry W., Lyons City, Iowa. Patteru-chart	Jan. 2, 1877	28	9	11	12
190,385	Suckow, Edmund, Buffalo, N. Y. Machine for squeezing puddlers' balls	May 1, 1877	269	79, 80	11	781
188,315	Sues, Louis, Chicago, Ill. Theater, and method of protecting the same from fire	Mar. 13, 1877	358	112	11	434
194,188	Suhr, Emil, Brooklyn, assignor to R. Neumann & Co., New York, N. Y. Lock for pocket-books	Aug. 14, 1877	422	127	12	297
197,183	Suitt, James B., assignor of one-half interest to L. W. Hasselman, Indianapolis, Ind. Grain-separator	Nov. 13, 1877	471	139	12	836
192,845	Sulgrove, Milton M., assignor of one-third interest to W. K. Sprone, Indianapolis, Ind. Saddlers' trimming-tool	July 10, 1877	318	93	12	63
193,900	Sullenberger, William H., assignor of one-half interest to J. Kerper, Harrisburg, Pa. Straw-cutter	Aug. 7, 1877	98	32	12	248
	Sullens, David, *et al.* (*See* Smith, William H., assignor.)					
	Sullivan, Algernon S., administrator. (*See* Cumming, David.)					
189,585	Sullivan, Daniel, Bangor, Me. Construction of steam-boilers	Apr. 17, 1877	593	183	11	652
191,621	Sullivan, Daniel M., and T. A. Retallic, Montgomery City, Mo. Chicken-coop	June 5, 1877	103	32	11	990
187,932	Sullivan, John, Tippecanoe City, Ohio. Reversible back for lounges	Feb. 27, 1877	1033	318	11	367
	Sullivan, John N., *et al.* (*See* Bell, James H., assignor.)					
	Same.....(*See* Medearis, John T., assignor.)					
196,721	Sulzbacher, Mirum, New York, N. Y. Water-closet	Oct. 30, 1877	1086	315	12	749
198,433	Sulzbacher, Mirum, and C. E. Yvelin, New York, N. Y. Water-closet	Dec. 18, 1877	750	227	12	1070
195,673	Summers, Alexander B., Brooklyn, assignor to self and J. A. Squires, New York, N. Y. Portable illuminated cover for stoves	Sept. 25, 1877	938	280	12	557
187,065	Summers, George, Niles, Ohio. Machine for shearing sheet-metal	Feb. 6, 1877	141	47	11	222
194,482	Summers, Jacob, and J. Trimble, Muncie, Ind. Cultivator	Aug. 21, 1877	727	216	12	345
196,722	Summers, Lucius P., assignor to P. & F. Corbin, New Britain, Conn. Butt-grinding machine	Oct. 30, 1877	1086	315 316	12	749
191,898	Sumner, Edwin, Baldwinsville, Mass. Pulp-engine	June 12, 1877	378	116 117	11	1031
190,643	Sumpter, Samuel W., and H. Brown, Bowling Green, Ky. Fence	May 8, 1877	549	163	11	826
193,100	Sunderman, John H., Quincy, Ill. Whip-socket	July 17, 1877	574	173	12	106
196,723	Sundquist, Charles, Chattanooga, Tenn. Combined mosquito-bar and clothes-drier	Oct. 30, 1877	1089	316	12	749
	Survillo, Lewis I. (*See* Yagn, Nicolas F., assignor.)					
	Susemihl, Francis C. L. G. (*See* Miller & Susemihl.)					
192,199	Susemihl, Francis C. L. G., and H. H. Howitt, Detroit, Mich. Railway axle-box lid	June 19, 1877	704	216	11	1086
196,947	Sutcliffe, Elihu A., New York, N. Y. Governor for steam-engines, &c	Nov. 6, 1877	217	64	12	790
186,507	Sutcliffe, Wilson, Weatherford, Tex. Wardrobe-bedstead	Jan. 23, 1877	710	218	11	129
193,288	Suter, Charles R., and E. E. Furney, Saint Louis, Mo. Physicians' saddle-bag	July 17, 1877	760	231	12	131
186,382	Suter, John, New York, N. Y. Indexor	Jan. 16, 1877	583	178	11	99
195,545	Sutherland, Charles H., Brownsburg, Va. Folding chair	Sept. 25, 1877	815	242	12	539
7,510	Sutherland, Daniel A., assignor to self and J. N. Smith, Lynn, Mass. Manufacturing boots and shoes.....(Reissue)	Feb. 13, 1877	543	166	11	286
7,558	Same.....Presser-foot for sewing-machines.....(Reissue)	Mar. 13, 1877	513	158	11	456

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
194,011	Sutherland, Daniel A., assignor to self and J. N. Smith, Lynn, Mass. Saddle-piece for seams of boots and shoes	Aug. 7, 1877	214	63	12	263
186,178	Sutherland, Mosher A., New York, N. Y. Metallurgic furnace	Jan. 9, 1877	368	110	11	65
196,547	Sutherland, Mosier A., New York, N. Y. Manufacturing iron and steel	Oct. 30, 1877	921		12	726
185,843	Sutherland, William, Manchester, England. Ornamenting wood, &c	Jan. 28, 1877	29		11	12
190,261	Same.....Attaching knobs to spindles	May 1, 1877	145	42	11	765
194,501	Sutherland, William S., Coombs Wood, Halesowen, England. Production of carbonic-oxide gas for heating and welding	Aug. 21, 1877	741		12	347
196,502	Same.....Machine for welding metal tubes	Aug. 21, 1877	745	222	12	347
196,948	Sutherlen, Benjamin W., Wykoff, assignor of one-half interest to W. S. Nace, Filimore, Minn. Machine for chamfering and crozing staves	Nov. 6, 1877	218	64, 64	12	790
	Sutphen, Arthur P., *et al.* (*See* Lathrop, John D., assignor.)					
187,738	Sutphen, George E., Aurora, Ill. Door-spring	Feb. 27, 1877	840	261	11	342
196,949	Sutphin, William A., Washington, D. C. Grain-binder	Nov. 6, 1877	219	65	12	790
196,950	Same.....Grain-band	Nov. 6, 1877	221	65	12	791
196,951	Same.....Mechanical movement	Nov. 6, 1877	222	66	12	791
197,182	Same.....Grain-binder	Nov. 13, 1877	468	{138 {139	12	836
	Sutter, Daniel, *et al.* (*See* Smith, Elizabeth W., assignor.)					
196,399	Sutter, Henry, Baker City, Oreg. Breech-loading fire-arm	Oct. 23, 1877	753	217	12	692
	Sutter Street Railroad Company. (*See* Hovey, Asa E., assignor.)					
191,083	Sutton, Benjamin F., Brooklyn, N. Y. Syringe-case	May 22, 1877	1008	300	11	902
7,955	Sutton, Edward H., Edenton, N. C. Cotton-cultivator (Reissue)	Nov. 20, 1877	758	225	12	887
192,308	Sutton, John, New York, N. Y. Chimney-top	June 19, 1877	829	252	11	1102
194,187	Sutton, John G., Rockport, Mo. Portable fence	Aug. 14, 1877	421	127	12	297
	Sutton, John W. (*See* Norris, William R., assignor.)					
187,428	Sutton, John W., New York, N. Y. Truss	Feb. 13, 1877	508	157	11	282
188,982	Same.....Counterfeit-coin detector	Mar. 27, 1877	1036	319	11	545
189,329	Swallow, Freeman M., Springfield, Mass. Breech-loading ordnance	Apr. 10, 1877	331	105	11	609
193,623	Same.....Burglar-alarm	July 31, 1877	1126	338	12	199
188,437	Swan, Alfred F., Hoboken, N. J. Turnstile	Mar. 13, 1877	481	149	11	451
188,316	Swan, Charles, assignor to J. A. Roebling's Sons Company, Trenton, N. J. Machine for drilling oil and other artesian wells	Mar. 13, 1877	358	{112 {113	11	434
	Swan, Frank W. (*See* Richards, Charles V., assignor.)					
	Swan, Henry C. (*See* Stevenson & Swan.)					
	Swan, Thomas B. (*See* Beal, Ezra F., assignor.)					
188,828	Swan, Thomas B., Minot, Me. Pump	Mar. 27, 1877	889	270	11	524
189,518	Swan, Thomas B., Mechanics Falls, Me. Suction and force pump	Apr. 10, 1877	503	159	11	632
191,727	Swan, Thomas B., Minot, and E. F. Edgecomb, Poland, Me.; said Edgecomb, assignor to said Swan. Rotary pump	June 5, 1877	201	63	11	1004
192,028	Swan, Thomas B., Mechanics Falls, Me. Double-acting pump	June 12, 1877	509	156	11	1048
192,950	Same.....Lift and force pump	July 10, 1877	412	123	12	77
196,952	Swart, Charles N., Elmira, N. Y. Harvester-cutter	Nov. 6, 1877	222	66	12	791
	Swartz, Gilbert R. (*See* Swartz, Samuel and G. R.)					
197,949	Swartz, John H., Brooklyn, assignor to self and W. G. Winans, New York, N. Y. Rotary water-meter	Dec. 11, 1877	247	77	12	990
189,668	Swartz, Samuel and G. R., Buffalo, N. Y. Safety car-stove	Apr. 17, 1877	672	208	11	662
196,054	Swasey, Otis W., Boston, Mass. Crayon	Oct. 9, 1877	376	107	12	622
192,846	Swasey, Samuel T., Salem, Mass. Apparatus for drying glue	July 10, 1877	318	93	12	61
197,950	Swathel, Wilbur F., Cleveland, Ohio. Machine for making tooth-picks	Dec. 11, 1877	249	77	12	990
194,937	Sweanor, George, Montreal, assignor to Neptune Fog Horn Company (limited), Quebec, Canada. Fog-signal	Sept. 4, 1877	182	56	12	425
191,488	Sweeney, George W., New York, N. Y. Lubricating compound	May 29, 1877	1409		11	963
191,489	Same.....Journal-box	May 29, 1877	1409	425	11	963
192,470	Sweeney, Newton J., Walesborough, Ind. Flood-gate	June 26, 1877	1000	301	11	1137
191,490	Sweeney, Peter, assignor to B. Collins, New York, N. Y. Lubricating compound	May 29, 1877	1410		11	963
191,491	Same.....same	May 29, 1877	1411		11	963
195,463	Sweet, Andrew D., Perrysburg, Ohio. Vegetable and fruit slicer	Sept. 25, 1877	741	219	12	529
192,394	Sweet, Benjamin F., Fond du Lac, Wis. Sleigh-shoe	June 26, 1877	938	281	11	1128
195,417	Sweet, Daniel E., Chicago, Ill. Telegraph-sounder	Sept. 18, 1877	681	202	12	513
193,355	Sweet, George, Dansville, and L. Sweet, Wellsville, N. Y. Harvester	July 24, 1877	842	258	12	150
	Sweet, Lebbeus. (*See* Sweet, George and L.)					
7,820	Sweet, Miles, Troy, N. Y. Curry-comb (Reissue)	July 31, 1877	1304	391	12	224
7,821	Same.....same (Reissue)	July 31, 1877	1305	391	12	224
7,822	Same.....same (Reissue)	July 31, 1877	1306	391	12	224
191,784	Same.....same	June 12, 1877	267	83	11	1017
194,384	Sweet, Parker H., jr., Georgetown, D. C. Paper-fastener	Aug. 21, 1877	623	187	12	331
	Sweet, Samuel, *et al.* (*See* Fenton, Emery W., assignor.)					
191,555	Sweetland, James E., Lawrenceville, Pa. Label-holder	June 5, 1877	46	13	11	982
	Sweetland, Jerome B. (*See* Hubbard & Sweetland.)					
187,933	Sweetland, Jerome B., Pontiac, Mich. Churn	Feb. 27, 1877	1034	318	11	367
	Sweetser, Sanford D., *et al.* (*See* Cherey & Butterfield, assignors.)					
194,189	Sweezy, George P., assignor of one-half interest to A. Bradley, Riverhead, N. Y. Wagon-seat spring	Aug. 14, 1877	423	127	12	297
188,438	Swenarton, Robert, Newtown, N. Y. Neck-tie	Mar. 13, 1877	482	149	11	451
	Swentzel, E. W. (*See* Gissinger, Samuel, assignor.)					
188,204	Swett, Edward E., Edenburg (Knox P. O.), Pa. Operating signal-lanterns for oil-wells	Mar. 6, 1877	243	76	11	412
196,999	Swett, Edward E., Knox, assignor to Producers' Torpedo Company, Franklin, Pa. Torpedo for oil-wells	Nov. 13, 1877	280	83	12	808
7,468	Swett, George W., Shaftsbury, Vt. Furnace for smelting and treating metals. (Reissue)	Jan. 16, 1877	615	188	11	103
194,113	Swett, George W., Troy, N. Y. Treating and restoring the metal of old car-wheels	Aug. 14, 1877	350		12	287
	Swift & Courtney & Beecher Company. (*See* Beecher, Ebenezer B., assignor.)					
	Same.....(*See* Swift & Wilson, assignors.)					
190,096	Swift, Almon, East Elmore, Vt. Ditching and draining machine	Apr. 24, 1877	1138	346	11	731
	Swift & Courtney & Beecher Company. (*See* Swift, William H., assignor.)					
190,644	Swift, Earl M., Windham, Conn. Slate-cleaner	May 8, 1877	550	163	11	826
	Swift, J. H. (*See* Bopp, Christ, assignor.)					
192,883	Swift, William H., assignor to Swift & Courtney & Beecher Company, Wilmington, Del. Paper box	July 10, 1877	352	104	12	68
196,315	Swift, William H., and J. F. Wilson, assignors to Swift & Courtney & Beecher Company, Wilmington, Del. Method and apparatus for dipping matches	Oct. 23, 1877	674	194	12	680
186,066	Swingly, Frederick, Bucyrus, Ohio. Nut-lock	Jan. 9, 1877	256	77	11	51
	Switer, Emanuel. (*See* Houghtaling & Switer.)					
	Swords, George H. (*See* Tracey, William H., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
187,429	Sykes, George S., Manahawken, N. J. Combined desk and chest of drawers	Feb. 13, 1877	509	157, 158	11	282
	Sylvester, Amos W., *et al.* (*See* Wiswell, Theodore L., assignor.)					
188,760	Sylvester, Benjamin, Saint Peter, Minn. Insect-trap	Mar. 27, 1877	809	248	11	514
198,165	Sylvester, Charles F., Brockton, Mass. Shoe-fastening	Dec. 11, 1877	463	145	12	1021
	Sylvester, James J., *et al.* (*See* Quinby & Whiting, assignors) (Reissue.)					
198,434	Sylvester, Warren B., Stevens Point, Wis. Passenger-recorder	Dec. 18, 1877	751	227	12	1070
186,897	Syme, Chapman J., assignor to self and P. T. Young, Petersburg, Va. Churn-dasher	Jan. 30, 1877	1096	339	11	189
189,519	Symonds, Charles D., Boston, Mass. Broiler	Apr. 10, 1877	501	159	11	632
195,674	Syversen, Andreas, assignor of one-half interest to J. S. Dennis, Chicago, Ill. Stove-pipe-elbow machine	Sept. 25, 1877	939	280	12	557
	Tabb, William D., *et al.* (*See* Nix, John D., assignor.)					
196,839	Taber, Loyal C., Eaton, N. Y. Attachment for feeding straw to furnaces	Nov. 6, 1877	101	31	12	775
197,063	Tabler, John H., Mount Juliet, Tenn. Flax-brake	Nov. 13, 1877	345	102	12	818
196,499	Tabony, Joseph H., assignor of one-half interest to P. Pizzini, New Orleans, La. Game-counter	Oct. 23, 1877	853	245	12	705
191,084	Tabor, Harris, assignor to B. W. Payne & Son, Corning, N. Y. Governor for steam-engines	May 22, 1877	1008	300	11	902
	Tabraham, Leonard G. (*See* Batt, Henry, assignor.)					
186,767	Taft, Allis H., Franklin, N. Y. Stanchion	Jan. 30, 1877	964	299	11	173
	Taft, Charles E. (*See* Lowis, Edward C., assignor.)					
190,525	Taft, Gustavus E., Whitinsville, Mass. Spinning-machine	May 8, 1877	426	125	11	810
193,571	Taft, Gustavus E., Northbridge, Mass. Cotton-carding engine	July 24, 1877	1055	316	12	178
197,427	Taft, Owen W., Brooklyn, N. Y. Bird-cage	Nov. 20, 1877	731	219	12	882
193,901	Taggart, George J. A., Parsons, Kans. Fire-escape	Aug. 7, 1877	101	32	12	249
188,439	Taggart, William L., assignor to self and W. R. Taggart, Niles, Mich. Millstone-curb.	Mar. 13, 1877	483	149	11	451
	Taggart, William R. (*See* Taggart, William L., assignor.)					
	Tait, Allen J. (*See* Hainque, Martial, assignor.)					
	Talbot, Frederick J. (*See* Ibbotson & Talbot.)					
188,693	Talbot, Allan, Richmond, Va. Tobacco and cotton press	Mar. 20, 1877	735	225	11	495
196,055	Talcott, Charles W., Woonsocket, R. I. Fire-extinguisher	Oct. 9, 1877	376	107	12	622
	Talcott, William A., *et al.* (*See* Jones, James H., assignor.)					
187,782	Taliaferro, Edwin H., and S. Kline, sr., Columbus, Miss. Cotton-cleaner	Feb. 27, 1877	885	275	11	348
196,953	Tallent, Jonathan, Riceville, Tenn. Force-pump	Nov. 6, 1877	223	66	12	791
	Talley, James, jr. (*See* Hale, Ezra M., assignor.)					
196,266	Talley, James, jr., Kansas City, Mo. Rotary hydraulic engine	Oct. 16, 1877	610	175	12	662
196,724	Tallman, George W., New York, N. Y. Clipping device	Oct. 30, 1877	1090	316	12	749
7,737	Tallman, John C., New York, N. Y. Bosom-pad (Reissue)	June 12, 1877	542	166	11	1052
186,047	Tallman, William E., Homer, N. Y. Carriage-top	Jan. 9, 1877	239	72	11	49
186,442	Talmadge, James W., New York, N. Y. Squirt-can	Jan. 23, 1877	657	201	11	121, 122
190,386	Talmadge, Robert, Coshocton, Ohio. Washing-machine	May 1, 1877	271	80	11	781
195,313	Tamaguo, Oscar, New York, N. Y. Floating oil-burner	Sept. 18, 1877	586	172	12	498
194,385	Tanenbaum, Moses, Grafton, Ill. Wash-boiler	Aug. 21, 1877	623	188	12	331
188,033	Tannahill, John N., Bradford, Iowa, assignor to self and E. A. Bigelow, Farmington, Minn. Lathe-gear	Mar. 6, 1877	81	23	11	391
186,637	Tanner, Alfred B., assignor to Sargent & Co., New Haven, Conn. Snap-hook	Jan. 23, 1877	835	258	11	146
190,929	Tanner, Henry, Buffalo, N. Y. Casing for car-stoves	May 15, 1877	839	248	11	871
	Tanner, James D. (*See* Hinkley, Charles C., assignor.)					
194,743	Tapley, Frederick F., and C. H. Porter, East Stoughton, Mass. Device for automatically measuring the superficial area of sides of leather, &c	Aug. 28, 1877	978	290, 291	12	389
	Taplin, Alvin. (*See* Hatch, Anson, assignor.)					
	Taplin, John L. (*See* Wellhouse & Taplin.)					
	Tappey, William H., *et al.* (*See* Ball, Richard, assignor.)					
	Same (*See* Beasley, Charles J., assignor.)					
	Tarbell, Frank P. (*See* Hall, Charles H., assignor.)					
	Tarble, H. J. (*See* Eade, Charles, assignor.)					
191,265	Tarbox, Eugene L., New York, N. Y. Hand-stamp	May 29, 1877	1200	360	11	936
193,568	Tarkington, Matthew S., Indianapolis, Ind. Whip-socket	July 24, 1877	1052	315	12	178
196,602	Tarr, Charles M., Gloucester, Mass., assignor to A. Voss, Gloucester, Mass. Rudder-chock for vessels	Oct. 30, 1877	971	282	12	733
192,719	Tarr, John, Leavenworth, Kans. Car-brake	July 3, 1877	164	47	12	35
187,066	Tarrant, William H., Eau Claire, Wis. Floor-clamp	Feb. 6, 1877	141	47	11	222
192,029	Tartt, Pembroke S., and G. F. Wilson, Wingo's Station, Ky. Cultivator	June 12, 1877	510	156	11	1049
193,196	Tascher, Jacob, Central City, Colo. Canal-boat propeller	July 17, 1877	655	200	12	117
193,197	Same Device for converting motion	July 17, 1877	655	200	12	117
	Tasker & Co. (*See* Munzinger, Peter, assignor.)					
	Tasker & Co., Morris. (*See* Munzinger, Peter, assignor.)					
8,009	Tasker, Stephen P. M., Philadelphia, Pa. Machine for welding metal tubes (Reissue)	Dec. 25, 1877	1062	322, 323	12	1123
186,768	Same same	Jan. 30, 1877	965	299	11	173
186,769	Same same	Jan. 30, 1877	966	300	11	173
195,731	Same Die for drawing metal tubes	Oct. 2, 1877	42	12, 13	12	566
197,909	Tate, George W., Mebanesville, N. C. Thrashing-machine	Dec. 4, 1877	203	61	12	975
189,586	Tate, Isaac C., assignor to P. Williams, New London, Conn. Manufacture of horse-shoe nails	Apr. 17, 1877	594	183	11	652
198,057	Tatham, Benjamin, New York, N. Y. Apparatus for manufacture of drop-shot	Dec. 11, 1877	350		12	1006
188,694	Tatlock, George, and S. Newby, New Philadelphia, Ind. Corn-planter	Mar. 20, 1877	735	225	11	495
191,728	Tatro, William B., Hartford, Conn. Reducing nickel ore	June 5, 1877	202		11	1004
	Tattershall, Richard. (*See* Haskin, Henry P., assignor.)					
	Taws & Hartman. (*See* Hartman, John M., assignor.)					
190,169	Taylor, Alfred, New York, N. Y. Settee	May 1, 1877	62	16	11	754
192,094	Taylor, Carlo R., South Bend, Ind., assignor of one-half interest to J. Grant, Chicago, Ill. Harrow	June 19, 1877	598	182	11	1073
197,682	Taylor, Carlo R., South Bend, Ind. Harrow-tooth	Nov. 27, 1877	1003	300	12	931
196,500	Taylor, Charles A., Chicago, Ill. Trunk-fixture	Oct. 23, 1877	854	245, 246	12	705
190,454	Taylor, Charles F., Springfield, Mass. Paper box	May 8, 1877	358	104	11	801
	Taylor, Charles W. H. (*See* Might & Taylor.)					
192,030	Taylor, Charles Y., and J. T. Bruen, Brooklyn, N. Y. Slide for chandeliers	June 12, 1877	511	156	11	1049
187,783	Taylor, Edmund B., Portland, Me. Machine for trouncing hats	Feb. 27, 1877	885	276	11	348
198,706	Taylor, Edwin S., Brooklyn, N. Y. Measuring apparatus for seed-heaters	Dec. 25, 1877	1025	312	12	1119
	Taylor, Elhanan C. (*See* Isbell & Taylor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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193,570	Taylor, Franklin, and H. F. Baker, jr., Centreville, Ind. Washing-board	July 24, 1877	1054	316	12	178
188,983	Taylor, George, New York, N. Y. Toy ship	Mar. 27, 1877	1038	319	11	545
	Taylor, Henry, *et al.* (*See* Harrington, Samuel H., assignor.)					
197,951	Taylor, Henry, Baltimore, Md. Valve motion for steam-engines	Dec. 11, 1877	251	77	12	991
189,882	Taylor, Henry E., Chester, England. Ore-washer	Apr. 24, 1877	912	278	11	702
	Taylor, Hiram. (*See* Wells, Edward C., assignor.)					
189,147	Taylor, Horace H., Warsaw, and A. McCamish, East Saint Louis, Ill., assignors to J. F. Degnon, Saint Louis, Mo., and C. D. Leet, Springfield, Mass. Steam and air brake.	Apr. 3, 1877	118	42	11	575
	Taylor, James. (*See* Brennam, Taylor & Lyman.)					
189,072	Taylor, James, Indianapolis, Ind. Hose-bridge	Apr. 3, 1877	56	21	11	567
191,899	Taylor, James, Luzerne, and J. T. Outterson, Palmer Falls, N. Y. Manufacture of paper-pulp from wood	June 12, 1877	379	117	11	1031
193,293	Taylor, James G., and C. D. Williams, Saint Paul, Minn. Safe and vault	July 17, 1877	765	235	12	131
189,813	Taylor, James M., Indiana, Pa. Writing-fluid	Apr. 17, 1877	816		11	681
189,811	Taylor, James P., Carter Depot, Tenn. Feeder for machine-guns	Apr. 17, 1877	814	251	11	680
190,645	Taylor, James P., Elizabethton, Tenn. Machine-gun	May 8, 1877	550	{163 164}	11	826
194,566	Taylor, James S., Danbury, Conn. Machine for felting hat-bodies	Aug. 28, 1877	814	242	12	366
188,695	Taylor, Jeremy, Three Rivers, Mich. Washing-machine	Mar. 20, 1877	736	226	11	495
185,875	Taylor, John, Alden, Minn. Hay-press	Jan. 2, 1877	60	19	11	16
188,984	Taylor, John D., Willington, Conn. Device for teaching penmanship	Mar. 27, 1877	1038	319	11	545
195,465	Taylor, John K., Romeo, Mich. Hand-planter	Sept. 25, 1877	742	219	12	529
195,183	Taylor, Levi, Marlborough, Mass. Hand fire-engine	Sept. 11, 1877	444	132	12	471
	Taylor Manufacturing Company. (*See* Beck, Robert M., assignor.)					
	Taylor Manufacturing Company *et al.* (*See* Haines, Lewis H., assignor.)					
	Taylor, Richard W. (*See* Mitchell, Robert, assignor.)					
192,604	Taylor, Robert, Philadelphia, Pa. Apparatus for molding crucibles and pots	July 3, 1877	49	14	12	19
	Taylor, Salem R. (*See* Pentz, Levi, assignor.)					
	Taylor, Samuel. (*See* Taylor, William H., assignor.)					
186,179	Taylor, Theodore F., Richmond, Va. Branding-stamp	Jan. 9, 1877	362	110	11	65
198,707	Taylor, Thomas, assigner to Page Manufacturing Company, Canton, Ill. Casting wheels	Dec. 25, 1877	1026	312	12	1119
193,787	Taylor, Thomas I., Eureka, Nev. Dust-trap for furnaces	July 31, 1877	1292	388	12	222
	Taylor, Warren H. (*See* Hermann & Taylor) (Reissue.)					
	Same (*See* Keating & Taylor.)					
189,520	Taylor, Warren H., assignor to Yale Lock Manufacturing Company, Stamford, Conn. Stock for the manufacture of keys	Apr. 10, 1877	505	160	11	633
189,521	Same.....Key for locks	Apr. 10, 1877	505	160	11	633
192,847	Same.....Padlock	July 10, 1877	319	94	12	63
193,569	Same.....Key for locks	July 24, 1877	1053	316	12	178
197,683	Same.....Drawer-lock	Nov. 27, 1877	1003	300	12	931
197,684	Same.....Key	Nov. 27, 1877	1004	300	12	931
197,910	Same.....Drawer-lock	Dec. 4, 1877	204	61	12	975
	Taylor, William. (*See* Stone, William, assignor.)					
	Taylor, William B., *et al.* (*See* Thompson, Peter, assignor.)					
195,054	Taylor, William B. S., Union County, N. J. Gas drop-light	Sept. 11, 1877	310	94	12	450
187,689	Taylor, William F., Medina, N. Y. Student's chair	Feb. 20, 1877	761	236	11	323
	Taylor, William H., *et al.* (*See* Drake, John, assignor.)					
195,856	Taylor, William H., Baldwinsville, N. Y., assignor of one-half interest to S. Taylor, Hamilton, Canada. Gig-saddle tree	Oct. 2, 1877	166	46	12	584
196,056	Taylor, William J., Chester, N. J. Ore-roasting furnace	Oct. 9, 1877	377	{107 108}	12	622
197,297	Tayman, Benjamin J., Philadelphia, Pa. Apparatus for drying fruit, smoking meat, &c.	Nov. 20, 1877	598	{177 178}	12	863
190,727	Teal, Alfred E., Greenfield, and C. E. Nelson, Cicero, Ind. Thill-support	May 15, 1877	657	194	11	847
187,067	Teal, James R., and G. Moulder, Phœnixville, Pa. Slate-pencil sharpener	Feb. 6, 1877	142	47	11	222
	Teas, Noble. (*See* Cahoone & Teas.)					
197,685	Teed, Lorenzo P., assignor of two-thirds interest to T. F. Noble and W. W. Lyle Erie, Pa. Paving composition	Nov. 27, 1877	1005		12	932
194,272	Tegnander, Conrad S., Gottenburg, Sweden, assignor of one-third interest to A. L. Johnson, Boston, Mass. Wagon-wheel	Aug. 14, 1877	501	151	12	308
	Telegraph Supply Company. (*See* Brush, Charles F., assignor.)					
	Telford, George. (*See* Gordon, Myers, Telford & Hubbard.)					
193,429	Telle, Edwin, New Orleans, La. Tool-stock for dental engines	July 24, 1877	914	278	12	160
	Telyea, C. B. (*See* Wilson, Aaron, assignor.)					
190,695	Temme, Christian, Saint Louis, Mo. Metallic sign-letter	May 15, 1877	621	184	11	842
188,552	Temple, Anson F., Montague, Mich. Curtain-roller	Mar. 20, 1877	598	184	11	476
187,934	Temple, Morris D., Chicago, Ill. Pump	Feb. 27, 1877	1034	318	11	368
189,966	Temple, Thomas W., Los Angeles, Cal. Oyster-opening machine	Apr. 24, 1877	989	302	11	712
191,384	Same.....Implement for opening oysters	May 29, 1877	1298	393	11	950
191,785	Temple, William M., Port Dickinson, N. Y. Horseshoe	June 12, 1877	269	83	11	1018
189,148	Templeton, James, Florence, Ga. Cotton-press	Apr. 3, 1877	119	42	11	575
	Templeton, John C. (*See* Templeton, Samuel R., J. C., and J. H.)					
	Templeton, Joseph H. (*See* Templeton, Samuel R., J. C., and J. H.)					
190,794	Templeton, Samuel R., J. C., and J. H., Brownsville, Oreg. Hop-drier	May 15, 1877	712	211	11	855
194,626	Tener, Charles, New Market, Ohio. Stump-extractor	Aug. 28, 1877	864	257	12	373
186,900	Tennant, Henry N., Fredonia, N. Y. Honey-box	Jan. 30, 1877	1099	340	11	190
	Tennant, Moses D. (*See* Shaver, George F., assignor.)					
193,734	Tennent, John C., Aquasco P. O., Md. Tobacco and cabbage planter	July 31, 1877	1232	370	12	214
194,012	Tenner, Armin, Cincinnati, Ohio. Automatic fire-extinguishing apparatus	Aug. 7, 1877	215	64	12	264
196,400	Terman, James W., assignor of one-half interest to J. H. Tucker and S. E. Howe, Logansport, Ind. Corn-harvester	Oct. 23, 1877	755	218	12	692
189,522	Terrell, Enoch P., Bloom Center, Ohio. Saw-grinder	Apr. 10, 1877	506	160	11	633
195,418	Terrell, Enoch P., and J. Foos, Bellefontaine, Ohio. Corn-planter	Sept. 18, 1877	682	202	12	503
197,298	Terrell, Enoch P., Bellefontaine, Ohio. Saw-grinder	Nov. 20, 1877	599	178	12	863
198,708	Same.....Lawn-mower	Dec. 25, 1877	1027	312	12	1119
194,627	Terrill, Amos M., Petrolia, Pa. Check-valve for oil-pumps	Aug. 28, 1877	865	258	12	374
196,840	Terrill, Joshua C., Owensborough, Ky. Combined plant-setter and seed-planter	Nov. 6, 1877	102	31	12	775
	Terry, Albert O., *et al.* (*See* Noble, Jay, assignor.)					
	Terry, Ira C., *et al.* (*See* Noble, Jay, assignor.)					
197,184	Terry, Joseph P., Lake City, Fla. Cultivator	Nov. 13, 1877	472	139	12	836
196,954	Terry, Thomson, Mount Olivet, Ky. Sulky corn-planter and grain-drill	Nov. 6, 1877	224	66	12	791
197,804	Teter, Washington, Flint Ridge, Kans. Double-acting pump	Dec. 4, 1877	98	30	12	960

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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188,206	Teters, James C., San Francisco, Cal. Button-fastening	Mar. 6, 1877	245	76	11	412
191,266	Texier, Hippolyte, New York, N. Y. Glove-fastener	May 29, 1877	1201	360	11	936
185,987	Thacher, William F., Florence, N. J. Stop-valve	Jan. 2, 1877	171	53	11	31
187,329	Thacher, William F., Florence, N. J., assignor to W. Wood, Philadelphia, Pa. Stop-valve	Feb. 13, 1877	416	130	11	270
	Tharp, Benaiah A., *et al.* (*See* Planck, John, assignor.)					
194,386	Thatcher, George, Marlborough, N. H. Road-scraper	Aug. 21, 1877	624	188	12	331
	Thatcher, Simon W. (*See* Prindle, Edward T., assignor.)					
189,149	Thaulow, Harold, Christiania, Norway. Treating wool, oil, or grease to obtain glue or gelatine	Apr. 3, 1877	120		11	575
186,770	Thayer, Orlando D., Buffalo, N. Y. Test gage	Jan. 30, 1877	967	300	11	173
190,097	Thayer, Reuel H., Buffalo, N. Y., assignor to E. E. Hughes, Erie, Pa. Paper-bag machine	Apr 24, 1877	1138	346	11	731
192,848	Thayer, William S., Candor, N. Y. Hame-tug	July 10, 1877	330	94	12	64
198,255	Thedens, Ferdinand F., Lyons, Iowa. Portable fly-trap	Dec. 18, 1877	588	178	12	1046
196,267	Theegarten, Gottfried D., Muhlheim, assignor to self, J. Krause, and J. Gast, Berlin, Prussia. Car-coupling	Oct. 16, 1877	612	176	12	662
	Thein, Jacob. (*See* Schwartz, Gustav, assignor.)					
197,575	Theine, Carl, Minden, Prussia, Germany. Book-stitching machine	Nov. 27, 1877	897	267	12	915
194,294	Thiele, Gustav H., St. Petersburg, Russia. Sewing-machine	July 17, 1877	766	236	12	132
197,428	Thierman, John H., Louisville, Ky. Rectifying apparatus	Nov. 20, 1877	732	219	12	882
187,450	Thiers, William F., assignor of three-fourths interest to M. C. Jeffers, New York, E. F. Beecher, Brooklyn, and A. P. Armstrong, New York, N. Y. Ship's ventilator and fog-alarm	Feb. 13, 1877	516	158	11	283
7,476	Thistlewood, Thomas, assignor of one-half interest to L. M. Newbury, Sparta, Wis. Horseshoe (Reissue)	Jan. 23, 1877	861	265	11	150
	Thoen, Lauritz. (*See* Strand, August B., assignor.)					
191,267	Thom, John W., Minneapolis, Kans. Plow	May 29, 1877	1202	361	11	937
198,226	Thoman, Zacharias, Glenville, Pa., assignor of two-thirds interest to L. Kopp and E. Dubs. Cider-mill	Dec. 18, 1877	544	168	12	1040
	Thomas, Charles L. (*See* Magner & Thomas.)					
192,951	Thomas, Charles O., and T. Robertson, Murfreesborough, Tenn. Cotton-cleaner	July 10, 1877	413	124	12	77
	Thomas, Chauncey. (*See* Collier & Thomas.)					
193,296	Thomas, Douglas H., Baltimore, Md. Bill-file	July 17, 1877	770	236	12	132
186,068	Thomas, Eddy T., Boston, Mass. Gas-lighter	Jan. 9, 1877	258	78	11	51
	Thomas, Edward L., *et al.* (*See* De Haven, Rhoads, assignor.)					
192,097	Thomas, Enoch K., Saint Louis, Mo. Swing	June 19, 1877	601	183	11	1073
194,567	Thomas, George C., New York, N. Y. Box for paper collars	Aug. 28, 1877	815	243	12	366
191,268	Thomas, George H., assignor of one-half interest to W. J. McMurtry and C. Tod, Bowmansville, Canada. Shuttle for sewing-machines	May 29, 1877	1202	361	11	937
	Thomas, Giles D. (*See* Conway, William B., assignor.)					
196,841	Thomas, James, assignor of part interest to C. E. Broad and N. Spinks, San Francisco, Cal. Car-ticket nippers	Nov. 6, 1877	103	32	12	775
	Thomas, James E. (*See* Fordon & Thomas.)					
189,152	Thomas, James J., Cahts, and W. S. Anderfuren, San Francisco, Cal. Griping and propelling attachment for car-trucks and locomotives	Apr. 3, 1877	122	43	11	575
	Thomas, James L. (*See* Bacon & Thomas.)					
	Thomas, J. M., *et al.* (*See* Fields, Charles C., assignor.)					
	Thomas, John A. (*See* Barnard, Charles S., assignor.)					
186,771	Thomas, John C., Carlinville, Ill. Rotary engine	Jan. 30, 1877	967	300, 301	11	173
194,190	Thomas, John C. B., Palmyra, Mo. Cultivator	Aug. 14, 1877	423	128	12	297
197,747	Thomas, John F., Ilion, N. Y. Horse hay-rake	Dec. 4, 1877	41	13	12	952
194,013	Thomas, John H., Springfield, Ohio. Horse hay-rake	Aug. 7, 1877	215	64	12	263
194,014	Same same	Aug. 7, 1877	216	64	12	263
196,501	Same same	Oct. 23, 1877	855	246	12	705
188,485	Thomas, Julius, Chicago, Ill. Line-fastener	Mar. 20, 1877	538	166	11	468
194,568	Thomas, Nelson, Taunton, Mass. Trace-fastener	Aug. 28, 1877	816	243	12	366
196,603	Thomas, Phillip, assignor to self and A. H. Seavey, North Huron, N. Y. Grain-tally	Oct. 30, 1877	972	283	12	733
189,908	Thomas, Richard J., Milwaukee, Wis. Water-closet valve	Apr. 24, 1877	936	285	11	705
197,000	Thomas, Robert, Boston, Mass. Boiler-covering	Nov. 13, 1877	282	83	12	808
	Thomas, Thomas W. (*See* Brewer, Lloyd T., assignor.)					
	Thomas, William. (*See* Whitin, Thomas & Hough.)					
190,098	Thomas, William F., London, England. Sewing-machine	Apr. 24, 1877	1139	346, 347	11	731
190,387	Thomas, William H., Wilmington, Cal. Utilizing exhaust steam	May 1, 1877	273	80	11	781
197,429	Thomason, William G., Woodbury, Ind. Coffee-pot	Nov. 20, 1877	733	219	12	884
190,795	Thomass, Herman, Brooklyn, N. Y. Toy wagon	May 15, 1877	712	211	11	855
192,720	Thompson, Ahira, Harmony, Ill. Road-scraper	July 3, 1877	161	47	12	35
187,991	Thompson, Austin W., Northampton, Mass. Earth-closet	Mar. 6, 1877	36	9	11	385
195,055	Thompson, Benjamin, Toledo, Ohio. Quadruplex telegraph	Sept. 11, 1877	311	95	12	450
196,057	Same same	Oct. 9, 1877	380	108	12	621
189,150	Thompson, Charles H., Pittsburg, Pa. Manufacturer of plow-share	Apr. 3, 1877	120	43	11	575
193,356	Thompson, Charles H., assignor of one-half interest to T. O'Neill and I. Jenree, New York, N. Y. Car starter and motor	July 24, 1877	844	259	12	151
193,295	Thompson, Charles J. E., Providence, R. I. Adjustable link	July 17, 1877	769	236	12	132
191,622	Thompson, Charles R., Lebanon, Ky. Plow-colter	June 5, 1877	104	32	11	990
192,605	Thompson, David, Nashville, Tenn. Bee-hive	July 3, 1877	50	14	12	19
187,197	Thompson, David W., Englewood, Ill. Uniting the uppers of boots and shoes	Feb. 6, 1877	259	85	11	237, 238
192,096	Thompson, Elias W., Brooklyn, N. Y. Earth-closet	June 19, 1877	600	183	11	1073
	Thompson, Francis. (*See* Vieira, Manuel J., assignor.)					
193,198	Thompson, Francis E., and D. Knappenberger, Belknap, Pa. Open-front heating-stove	July 17, 1877	656	200	12	118
187,935	Thompson, Franklin A., Philadelphia, Pa. Refrigerator	Feb. 27, 1877	1135	318	11	368
188,829	Thompson, George, assignor to J. B. Proctor, Nashua, N. H. Machine for sawing hoop-poles	Mar. 27, 1877	889	270, 271	11	524
198,321	Thompson, George H., and G. P. Muldoon, Omaha, Nebr. Wooden vehicle-spring	Dec. 18, 1877	640	195	12	1054
190,930	Thompson, George M., Boston, Mass. Car-starter	May 15, 1877	840	249	11	872
190,931	Same Car-coupling	May 15, 1877	841	249	11	872
194,191	Thompson, George R., Quincy, Ill. Vegetable and fruit slicer	Aug. 14, 1877	424	128	12	298
188,317	Thompson, Headley, Elmira, N. Y. Shoe-holder	Mar. 13, 1877	361	113	11	435
	Thompson, Henry G. (*See* Hatch & Thompson.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Thompson, Henry G. (*See* Keith, Jeremiah, assignor).....(Reissue.)					
193,466	Thompson, Henry G., Milford, Conn. Lasting and tacking machine for boots and shoes	July 24, 1877	947	288	12	165
186,067	Thompson, Horace, Concord, N. H. Domestic boiler	Jan. 9, 1877	257	77	11	51
193,572	Thompson, James, Orange Valley, assignor of one-fourth interest to W. L. Dunn, Camden, N. J. Building-block	July 24, 1877	1056	316	12	178
	Thompson, John. (*See* McCauley, Charles, assignor.)					
187,936	Thompson, John A., Chicago, assignor to F. M. Smith, Lake, Ill. Detecter of counterfeit coin	Feb. 27, 1877	1026	319	11	368
189,284	Thompson, John A., Chicago, Ill. Counterfeit-coin detecter	Apr. 3, 1877	257	85	11	592
197,952	Same.....Sink-gas trap	Dec. 11, 1877	251	78	12	991
193,837	Thompson, John C., Brooklyn, N. Y., assignor of three-eighths interest to C. Fitz, New Orleans, La. Self-leveling berth for ships, &c	Aug. 7, 1877	39	13	12	239
	Thompson, John H. (*See* Wing & Thompson.)					
189,523	Thompson, Knud, and L. G. Bergstrom, Norwalk, Ohio. Fan attachment	Apr. 10, 1877	507	160	11	623
	Thompson, Larando L. (*See* Thompson, Uriah and L. L.)					
191,729	Thompson, Leander, and B. E. Parkhurst, assignors of one-third interest to F. M. Clarke, New York, N. Y. Refrigerator	June 5, 1877	203	64	11	1004
	Thompson, Levi M. (*See* Thompson, Stephen L. and L. M.)					
187,198	Thompson, Mary E., Chicago, Ill. Head-dress	Feb. 6, 1877	260	85	11	238
192,664	Thompson, Merritt L., Brooklyn, N. Y., assignor to self and J. P. Rittenhouse, Flemington, N. J. Barrel-head	July 3, 1877	119	53	12	28
192,031	Thompson, Orrin B., Jersey, Ohio. Vehicle-axle nut	June 12, 1877	512	156	11	1049
192,309	Same.....Adjustable axle-nut	June 19, 1877	830	252	11	1102
	Thompson, Perley and Waite. (*See* French, Erastus S., assignor).....(Reissue.)					
	Same.....(*See* Wheeler, John C., assignor.)					
189,587	Thompson, Peter, assignor to self, W. B. Taylor, and G. A. Blake, Calais, Me. Foghorn	Apr. 17, 1877	595	184	11	652
190,526	Thompson, Robert P., Philadelphia, Pa., assignor to E. H. Graham. Cap for water-tubes	May 8, 1877	428	125	11	810
184,061	Thompson, Robert W., Cleveland, Ohio. Wagon top and cover	Aug. 14, 1877	281	83	12	279
191,085	Thompson, Rosewell, and P. M. Beers, Bridgeport, Conn. Machine for straightening sewing-machine needles	May 22, 1877	1009	300, 301	11	902
191,195	Thompson, Rosewell, assignor to N. G. Miller, Bridgeport, Conn. Padlock	May 22, 1877	1111	332	11	916
	Thompson, Samuel J. (*See* Widdup & Thompson.)					
189,883	Thompson, Stephen L. and L. M., Kingfield, Me. Pantaloons	Apr. 24, 1877	913	279	11	702
192,797	Thompson, Thomas, assignor to self and J. R. Hamlin, Shioctin, Wis. Wagon-seat spring	July 3, 1877	242	71	12	45
193,297	Thompson, Uriah and L. L., Cardington, Ohio. Road-scraper	July 17, 1877	771	236	12	132
187,568	Thompson, William, Matteawan, N. Y. Harness-saddle pad	Feb. 20, 1877	652	203	11	309
193,298	Thompson, William, Raheny, Ireland. Manufacturer of prune-wines	July 17, 1877	772		12	132
186,639	Thompson, William C., Tipton, Tenn. Feathering-paddle wheel	Jan. 23, 1877	837	259	11	146
196,268	Same.....Rotary steam-engine	Oct. 16, 1877	614	170, 177	12	662
	Thompson, William F. (*See* Creager & Thompson.)					
	Thompson, William P. (*See* Robottom, Henry M., assignor.)					
	Thomsen, Niels. (*See* Thomsen, Poul, assignor).....(Reissue.)					
7,880	Thomsen, Poul, Atchison, Kans., assignor of one-third interest to N. Thomsen, Neenah, Wis. Wagon-brake lever.....(Reissue)	Sept. 11, 1877	465	139	12	474
192,032	Thomsen, Poul, Atchison, Kans. Wagon-brake lever	June 12, 1877	513	157	11	1049
193,624	Thomson, Alexander, Fitchburg, Mass. Machine for shearing boiler-plates	July 31, 1877	1127	338	12	199
198,227	Thomson, Harrison W., Louisville, Ky. Combined horse-collar and hame	Dec. 18, 1877	544	168	12	1040
197,185	Thomson, James A., Newark, N. J. Door-knob fastening	Nov. 13, 1877	473	139	12	886
194,744	Thomson, John, Rochester, N. Y. Watch-escapement	Aug. 28, 1877	980	291	12	389
197,430	Same.....same	Nov. 20, 1877	734	220	12	884
197,686	Same.....Stem-winding device for watches	Nov. 27, 1877	1006	300	12	932
197,687	Same.....Watch-regulator	Nov. 27, 1877	1007	301	12	932
	Thomson, Judson L. (*See* Murphy, William H., assignor.)					
195,675	Thomson, Judson L., New York, N. Y. Barrel head	Sept. 25, 1877	940	280, 281	12	557
	Thomson Mowing Machine Company. (*See* Thomson, Robert D., assignor.)					
189,151	Thomson, Robert B., Dansville, Mich. Plow	Apr. 3, 1877	121	43	11	575
195,907	Thomson, Robert D., North Platte, Nebr., assignor to Thomson Mowing Machine Company Mower	Oct. 9, 1877	226	64	12	601
	Thomson Steel Company Edgar. (*See* Jones, William R., assignor.)					
	Thomson, Sylvanus B. (*See* Baker, George P., assignor.)					
186,638	Thomson, William, Glasgow, North Britain. Mariner's compass	Jan. 23, 1877	836	258	11	146
	Thorn, John. (*See* McDonel, Thorn & Ewing.)					
186,383	Thorn, Joseph W., assignor to self and M. W. Beardsley, Iuka, Miss. Cotton-gin	Jan. 16, 1877	584	179	11	99
198,166	Thorn, Theodore, assignor of one-half interest to M. S. Stocker, Saint Clair, Pa. Shutter-bower	Dec. 11, 1877	464	145	12	1021
192,849	Thorn, William J., assignor of one-half interest to E. H. Harding, Leominster, Mass. Inkstand	July 10, 1877	321	94	12	64
	Thorn Wire Hedge Company. (*See* Peacock, Elijah P., assignor.)					
197,748	Thorne, George L., and G. C. Farnsworth, Buffalo, N. Y. Heater	Dec. 4, 1877	42	14	12	952
197,749	Thorne, George L., assignor of one-half interest to G. L. Farnsworth, Buffalo, N. Y. Portable heater	Dec. 4, 1877	44	14	12	952
	Thorne, Joseph. (*See* Reynolds & Thorne.)					
	Thorne, S. M. (*See* Doty, William, assignor.)					
191,269	Thorne, Sylvester L., assignor to C. Van Deryee; said Van Deryee assignor of one-half interest to D. H. Mathias, Albany, N. Y. Wire bale-band connection	May 29, 1877	1203	361	11	937
	Thornton & Co., John. (*See* Houghton, Henry, assignor.)					
186,180	Thornton, James, Camden Town, and J. Shallon, London, assignors to G. Howard, Middlesex County, England. Inlaying wood	Jan. 9, 1877	363	111	11	65
197,805	Thornton, Robert S. B., Pawtucket, R. I. Wool combing machine	Dec. 4, 1877	99	30	12	960
	Thornton, Thomas D. (*See* Greenwood, Thomas J., assignor.)					
	Same.....same.....(Reissue.)					
198,709	Thornton, William E., assignor to Pancoast & Maule, Philadelphia, Pa. Pipe-wrench with cutter	Dec. 25, 1877	1028	313	12	1119
188,440	Thorp, Alfred H., New York, N. Y. Fluid-trap	Mar. 13, 1877	484	150	11	451
195,056	Thorp, James H., New York, N. Y. Compound for artificial stone	Sept. 11, 1877	314		12	451
	Thorpe, Charles N., *et al.* (*See* Quirk, William, assignor.)					
192,138	Thorpe, Thomas P., assignor of one-half interest to C. E. Atwood, New York, N. Y. Working rattan	June 19, 1877	642	196	11	1078

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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190, 170	Thrift, William H., Newton, Iowa. Strainer-pail	May 1, 1877	63	17	11	754
192, 033	Throop, Monroe, and W. H. Doyle, Bantam Falls, Conn. Side-spring vehicle	June 12, 1877	514	157	11	1049
	Thuesen, Knud N. (*See* Olsen & Thuesen.)					
187, 681	Thurman, William H., Borden, Cal. Connecting lumber for transportation in flumes, &c.	Feb. 20, 1877	761	236	11	323
	Thurston, Benjamin J. (*See* Leavitt & Thurston.)					
	Thurston, Edward T. (*See* Smith & Thurston.)					
191, 385	Thurston, Samuel H., Whitestone, assignor to C. Edelheim, New York, N. Y. Tobacco-pipe	May 29, 1877	1299	393	11	950
	Thurston, Vandorius I. (*See* Hill & Thurston.)					
196, 059	Tibbals, Daniel S., Boston, Mass. Machine for making oakum	Oct. 9, 1877	382	109	12	623
	Tibbals, Harlan P. (*See* Lovell, William, assignor.)					
191, 730	Tibbetts, James, Saco, Me. Manufacture of shoes	June 5, 1877	205	64	11	1004
192, 952	Tibbits, John B., Hoosick, N. Y. Apparatus for propelling cars	July 10, 1877	414	124	12	77
190, 646	Tickner, Arvin C., Syracuse, N. Y. Bridle-bit	May 8, 1877	554	164	11	827
192, 542	Tiemann, Ferdinand, Berlin, Germany. Manufacture of vanillino	June 26, 1877	1077		11	1147
187, 431	Tierney, John P., Sacramento, Cal. Miter-machine	Feb. 13, 1877	513	158	11	283
189, 967	Same.....Box-scraper	Apr. 24, 1877	990	303	11	712
	Tiers, Alexander H., *et al.* (*See* Pendleton, John H., assignor.)					
	Tiers, Cornelius, *et al.* (*See* Pendleton, John H., assignor.)					
191, 196	Tiesing, Frank W., New Haven, Conn. Magazine fire-arm	May 22, 1877	1012	{332 333	{11	916
191, 197	Tiesing, Frank W., assignor to E. Whitney, New Haven, Conn. Breech-loading fire-arm	May 22, 1877	1114	333	11	917
193, 574	Tiesing, Frank W., New Haven, Conn. Magazine firm-arm	July 24, 1877	1058	317	12	179
	Tiffany & Co. (*See* Dimes, Richard, assignor).....(Reissue.)					
188, 985	Tiffany, David B., Xenia, Ohio. Curtain-fixture	Mar. 27, 1877	1039	319	11	545
188, 441	Tiffany, Eli, assignor of one-half interest to C. Cooper, Bennington, Vt. Knitting-machine	Mar. 13, 1877	484	{150 151	{11	452
193, 357	Tiffany, Joel, Chicago, Ill. Refrigerator-car	July 24, 1877	845	259	12	157
	Tifft, Alanson H. (*See* Green & Tifft.)					
	Tilden, E. B. (*See* McWilliams, John, assignor.)					
193, 625	Tilden, Harvey, Cleveland, Ohio. Hydraulic railway-signal	July 31, 1877	1128	338	12	200
7, 499	Tilghman, Benjamin C., Philadelphia, Pa. Cutting stone and other hard substances. (Reissue)	Feb. 6, 1877	291	95	11	{341 242
187, 240	Tilghman, Benjamin C., Philadelphia, Pa. Sawing and grinding hard substances	Feb. 13, 1877	322		11	258
191, 386	Tilghman, James, New York, N. Y. Stopper for mucilage-bottles	May 29, 1877	1299	394	11	950
191, 731	Tilghman, Noah J., Tyaskin, Md. Elliptic spring	June 5, 1877	205	64	11	1004
187, 239	Tilghman, Richard A., Philadelphia, Pa. Sawing stone	Feb. 13, 1877	321	104	11	258
195, 419	Tillack, Hermann, New York, N. Y. Combined steam-drum and cooking apparatus	Sept. 18, 1877	683	202	12	513
190, 796	Tilley, John R., Demerara, British Guiana, South America. Cultivator	May 15, 1877	713	211	11	855
	Tillinghast, Isaac F. (*See* Clay, Cyrus C., assignor.)					
194, 015	Tilman, Nelson T., Xenia, Ind. Writing-ink	Aug. 7, 1877	217		12	263
191, 198	Tilton, Edward W., Oshkosh, Wis., assignor of one-half interest to J. W. Branch, Saint Louis, Mo. Circular saw	May 22, 1877	1116	333	11	917
197, 688	Tilton, Edward W., Oshkosh, Wis. Circular saw	Nov. 27, 1877	1008	301	12	932
196, 058	Tilton, George, Alton, N. H., assignor to S. Tilton, Atlantic, Iowa. Calf-muzzle	Oct. 9, 1877	382	109	12	623
7, 519	Tilton, George W., Chicago, Ill., assignor, by mesne assignments, to self, M. Sellers, and J. Penketh. Locomotive fire-box.....(Reissue)	Feb. 20, 1877	780	243	11	326
	Tilton, John C. (*See* Curtis, Philip B., assignor.)					
191, 623	Tilton, Leonard, Brooklyn, N. Y. Hand-stamp	June 5, 1877	105	32	11	990
	Tilton, Smilie. (*See* Tilton, George, assignor.)					
198, 435	Timby, Theodore R., Tarrytown, N. Y. Salt-cellar and napkin-holder	Dec. 18, 1877	751	227	12	1070
197, 689	Timken, Henry, Saint Louis, Mo. Carriage-spring	Nov. 27, 1877	1009	301	12	932
191, 900	Tinsley, George W., and A. Hackman, Blakesburg, Iowa. Coffee-roaster	June 12, 1877	380	117	11	1031
189, 814	Tinsely, Granville J., Kane, Ill. Gate	Apr. 17, 1877	817	252	11	681
188, 986	Tippet, Arner L., Hawkinsville, Ga. Bushing for mill-spindles	Mar. 27, 1877	1039	320	11	545
192, 310	Tippett, Robert, and D. C. Jauss, Harrisburg, Pa. Metal-tank	June 19, 1877	831	253	11	1102
191, 732	Tirrell, Jacob P., Somerville, Mass. Electric railway-signal	June 5, 1877	206	65	11	1004
188, 034	Tisdale, Stephen A., assignor to Union Comb Company, Leominster, Mass. Machine for producing open-work in combs	Mar. 6, 1877	82	23	11	391
192, 695	Tisdale, Stephen A., Leominster, Mass. Treating horn for the manufacture of combs	June 19, 1877	599		11	1073
194, 016	Tittle, Christopher C., and J. F. Nolte, Cincinnati, Ohio. Water-filter	Aug. 7, 1877	218	65	12	263
	Titus, Amos N. (*See* Tupper, William H., assignor.)					
	Titus, S. L. (*See* Bostwick, Matthew, assignor.)					
194, 192	Tixier, Jules A., Brooklyn, N. Y. Fire-escape	Aug. 14, 1877	425	128	12	298
197, 690	Tizzard, Samuel B, Dayton, Ohio. Wall-fender for furniture	Nov. 27, 1877	1009	302	12	932
189, 968	Tobey, Lyman, Naples, N. Y. Nursery cooking-range	Apr. 24, 1877	990	303	11	712
192, 606	Tobey, Nathaniel M., Caroline, N. Y. Propelling canal-boats	July 3, 1877	51	15	12	19
	Tobias, Charles H. (*See* Diamant & Tobias.)					
195, 732	Tobien, Henry L., Cleveland, Ohio. Bag-holder and truck combined	Oct. 2, 1877	43	13	12	566
188, 696	Tobin, James C., assignor of one-half interest to O. O. Roberts, Northampton, Mass. Blacksmith's machine	Mar. 20, 1877	737	226	11	495
	Tobin, John R. (*See* Peterson, John R., assignor.)					
189, 524	Tobin, John R., Charleston, S. C. Machine for cutting and punching cotton-bale ties	Apr. 10, 1877	507	141	11	633
188, 442	Tobin, Richard, Macomb, Ill. Wind-anchor for frame houses	Mar. 13, 1877	488	151	11	452
	Toboldt, Leopold E. F., *et al.* (*See* Hangliter, Robert P., assignor.)					
	Tod, Charles, *et al.* (*See* Thomas, George H., assignor.)					
196, 842	Todd, Albert S., Pultneyville, N. Y. Mechanical movement	Nov. 6, 1877	106	32	12	776
	Todd, A. W. (*See* Todd, Henry B., assignor.)					
188, 553	Todd, George W., assignor to self, T. F. Grubbs, and J. T. Speer, Pittsburg, Pa. Gas-retort	Mar. 20, 1877	598	185	11	476
192, 395	Todd, Henry B., assignor of one-half interest to A. W. Todd, West Meriden, Conn. Stove-pipe damper	June 26, 1877	938	281	11	1128
	Todd, Isaac N. (*See* Stribling, Uriah B., assignor.)					
187, 199	Todd, John N., Cleveland, Ohio. Stove-hood	Feb. 6, 1877	260	85	11	238
	Todd, Nancy J. (*See* Todd, Robert L. and N. J.)					
191, 556	Todd, Robert L. and N. J., Shamrock, Mo. Chicken-coop	June 5, 1877	47	14	11	982
188, 205	Todd, Samuel F., and J. G. Sinsley, Jacob's Creek, Pa. Washing-machine	Mar. 6, 1877	241	76	11	412
195, 184	Todd, Simeon, Houston, Minn. Grain-separator	Sept. 11, 1877	445	133	12	471
185, 844	Toepfer, Peter G., Milwaukee, Wis. Card-rack	Jan. 2, 1877	30	9	11	72
	Toklas, Brown & Co. (*See* Aronson, Leon, assignor.)					
192, 471	Tolan, Thomas J., Fort Wayne, Ind. Bar for jails, prisons, &c	June 26, 1877	1001	301	11	1137
	Toll, Charles H. (*See* Gray, Jacob, assignor.)					
198, 710	Tolle, Charles, and C. Wirth, Godfrey, Ill. Harrow	Dec. 25, 1877	1029	313	12	1119

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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	Tolles, Willard C. (*See* Forster & Tolles.)					
187,937	Tolmie, Colin, assignor to R. P. Parrott, Cold Spring, N. Y. Attachment to tube-welding furnaces	Feb. 27, 1877	1037	319	11	368
191,199	Tomlinson, Edwin R., assignor to self and Eaton, Cole & Burnham Company, Bridgeport, Conn. Hose and pipe nozzle	May 22, 1877	1117	334	11	917
195,185	Tomlinson, James, Goderich, Canada, assignor of one-half interest to J. L. Gage, Rochester, N. Y. Barrel-machine	Sept. 11, 1877	446	133	12	471
191,901	Tomlinson, Joseph B., Black Hawk, Colo., assignor to self and G. L. Ketty, Brooklyn, N. Y. Box for shafting	June 12, 1877	380	118	11	1031
7,800	Tomlinson, Owen, Bombay, India. Car-axle box (Reissue)	July 17, 1877	796	244	12	136
	Tompkins, Abram G. (*See* Tompkins, Isaac and A. G.)					
191,291	Tompkins, Daniel A., South Bethlehem, Pa. Bale-tie	May 29, 1877	1226	368	11	940
	Tompkins, George W. (*See* Shirler, Charles S., assignor.)					
189,399	Tompkins, Isaac and A. G., Brooklyn, N. Y. Machine for grinding shavings	Apr. 10, 1877	396	126	11	618
196,269	Tompkins, Rhinelander C., New York, assignor to self and A. Spring, White Plains, N. Y. Hog-scraping machine	Oct. 16, 1877	615	177	12	662
	Tompkins, Samuel E. (*See* Kimie, Erastus M., assignor.)					
186,772	Tompkins, Samuel E., Sing Sing, N. Y. Harness-saddle	Jan. 30, 1877	969	301	11	173, 174
197,064	Same.....same	Nov. 13, 1877	346	102	12	818
195,420	Toninetti, Pietro, Hamburg, Germany. Solution for preserving meat	Sept. 18, 1877	684		12	513
192,098	Toohey, Maggie, Syracuse, N. Y. Plaiting-machine	June 19, 1877	601	183	11	1073
198,474	Toothill, Benjamin S., Hobart, Ind., assignor to self, W. and J. B. Guthrie. Manufacture of sirups	Dec. 25, 1877	804		12	1087
	Topliff, Cyrus L. (*See* Hopkins, George M., assignor.)					
191,818	Topliff, Cyrus L., Brooklyn, N. Y. Barbed fence	June 12, 1877	302	93	11	1021
186,640	Toppan, Charles, Wakefield, Mass. Lubricating compound	Jan. 23, 1877	837		11	146
187,992	Torrey, Joseph A., Boston, Mass. Mattress	Mar. 6, 1877	37	9	11	385
188,830	Torrey, Joseph R., Worcester, Mass. Razor-strop	Mar. 27, 1877	890	271	11	524
190,388	Tostevin, Thomas, Council Bluffs, Iowa. Chair	May 1, 1877	274	80	11	782
192,850	Same.....same	July 10, 1877	321	94, 95	12	61
192,953	Tostevin, Thomas, New York, N. Y. Vehicle-body	July 10, 1877	414	124	12	77
	Totten, Charles A. L. (*See* Miltimore & Totten.)					
187,432	Totten, Charles A. L., United States Army. Collimating-sight for fire-arms	Feb. 13, 1877	514	159	11	283
187,570	Same.....Pyrotechnic-shell	Feb. 20, 1877	654	203	11	309
198,322	Same.....Double postal card	Dec. 18, 1877	640	195	12	1054
195,966	Totten, Robert C., Pittsburg, Pa. Core for molding metal	Oct. 9, 1877	289	81	12	610
195,421	Toucey, Ferris D., and E. F. Scallen, Minneapolis, Minn. Packing for piston-rods	Sept. 18, 1877	684	203	12	513
	Touret, Eugene L. (*See* Boland, Ovide, assignor.)					
187,571	Tousley, Francis M., Lincoln, Nebr. Quilting-frame	Feb. 20, 1877	655	204	11	309
193,054	Tower, Abner J., Boston, Mass. Fishermen's apron	July 10, 1877	511	153	12	90
	Tower, George B. N. (*See* Renshaw & Tower.)					
	Tower, John J. (*See* Brock, William E., assignor.)					
	Same.....(*See* Johnson, Edward A., assignor.)					
	Towers, Ellen F., administratrix. (*See* Towers, William H.)					
198,712	Towers, Ellen F., Boston, Mass. Covering for monumental tombstones	Dec. 25, 1877	1031	313	12	1119
	Towers, John J. (*See* Phelps, Orson C., assignor) (Reissue.)					
	Towers, John V. R. (*See* Burr & Towers.)					
	Towers, Michael, jr. (*See* Brownback & Towers.)					
195,464	Towers, William H., Boston, Mass., E. F. Towers, administratrix. Cough candy or sugar	Sept. 25, 1877	741	219	12	529
190,932	Towers, William M., Rome, Ga. Plow	May 15, 1877	842	249, 250	11	872
197,691	Same.....same	Nov. 27, 1877	1010	302	12	932
	Towle, Hamilton E. (*See* Daniels, William, assignor) (Reissue.)					
	Towle, Hamilton E. (*See* Squire, John J., assignor) (Reissue.)					
189,153	Towle, Hamilton E., Roselle, N. J., and R. A. Plass, New York, N. Y.; said Plass assignor to said Towle. Attachment for automatically closing cocks and faucets	Apr. 3, 1877	123	44	11	576
	Towles, Henry O. (*See* Röpe, Henry W., assignor.)					
193,735	Town, Byron, Fond du Lac, Wis. Device for bracing cultivator-teeth	July 31, 1877	1234	370	12	214
189,969	Towne, Alban N., San Francisco, Cal. Pneumatic signaling apparatus	Apr. 24, 1877	991	303	11	712
187,330	Towne, Eugene J., assignor to self and J. W. Goodman, North Dana, Mass. Parallel ruler	Feb. 13, 1877	416	130	11	271
194,273	Towne, Henry R., and E. Stockwell, assignors to Yale Lock Manufacturing Company, Stamford, Conn. Time-lock	Aug. 14, 1877	562	152	12	303
194,274	Same.....Bolting mechanism for safe and vault doors	Aug. 14, 1877	563	152	12	308
188,267	Towne, Lanriston, Provideoce, R. I. Stud and button	Mar. 13, 1877	308	98	11	428
188,318	Towne, William J., Newton, assignor to Highland Foundry Company, Boston, Mass. Hot-air furnace	Mar. 13, 1877	361	113	11	435
198,711	Towns, Elson, Cisne, Ill. Governor for steam-engines	Dec. 25, 1877	1070	313	12	1119
187,784	Townsend, Alice C., Buffalo, N. Y. Butter-dish	Feb. 27, 1877	886	276	11	348
198,256	Townsend, David, Clinton City, Iowa. Peat-compressing machine	Dec. 18, 1877	588	178	12	1046
186,901	Townsend, Eli C., and A. Washburn, New York, N. Y. Egg-poaching utensil	Jan. 30, 1877	1099	340	11	190
190,455	Townsend, Samuel, East Dulwich, England. Band or cord for driving machinery, &c.	May 8, 1877	359	104	11	801
191,200	Townsend, Samuel S., Philadelphia, Pa. Machine for making nuts	May 22, 1877	1117	334, 335	11	917
198,167	Townsend, Stephen, and J. Vickers, Guysville, Ohio. Gate-hinge	Dec. 11, 1877	465	145	12	1021
187,938	Towsey, Thomas J., New York, N. Y. Device for detecting counterfeit coin	Feb. 27, 1877	1038	319	11	368
	Towsley, D. B. (*See* Gregory, Charles A., assignor.)					
189,154	Towson, William W., Baltimore, Md. Skirt-supporter	Apr. 3, 1877	124	44	11	576
197,692	Towson, William W., assignor of one-half interest to A. H. Henderson, Baltimore, Md. Car-axle	Nov. 27, 1877	1011	302	12	932
196,604	Tracy, Asahel B., Mayville, N. Y. Check-rein support for harness	Oct. 30, 1877	972	282	12	773
194,483	Tracy, John D., Sterling, Ill. Horse hay-rake	Aug. 21, 1877	728	217	12	345
188,207	Tracy, William, Poughkeepsie, assignor of one-half interest to G. H. Swords, Fishkill on the Hudson, N. Y. Door-plate	Mar. 6, 1877	245	77	11	412
189,525	Tragheim, Simon, New York, N. Y. Ice-machine	Apr. 10, 1877	508	161	11	633
196,060	Train, Jarvis C., Lowell, Mich. Bee-hive	Oct. 9, 1877	383	109	12	624
188,208	Traphagen, Henry L., New York, N. Y. Boiler-feeder	Mar. 6, 1877	246	77	11	412
187,785	Trapp, Joseph D., Lexington, Ky. Branding-stamp	Feb. 27, 1877	887	276	11	348
196,270	Trask, Charles H., Lynn, Mass. Combination writing instrument	Oct. 16, 1877	616	177	12	662
7,565	Traut, Justus A., and H. Richards, New Britain, Conn. Bench plane (Reissue)	Mar. 20, 1877	768	256	11	499

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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186,281	Traut, Justus A., New Britain, Conn. Device for adjusting plane-irons	Jan. 16, 1877	461	142	11	85
192,139	Same.....Miter-box	June 19, 1877	642	196	11	1078
194,851	Same.....Carpenter's level	Sept. 4, 1877	94	30	12	414
197,530	Traut, Justus A., New Britain, Conn., and J. A. Maass, New York, N. Y. Door-check	Nov. 27, 1877	856	255	12	910
190,099	Trautmann, Ralph, assignor to self and G. J. Browne, New York, N. Y. Spool show-box	Apr. 24, 1877	1140	347	11	731
	Travis, Claudius B. (*See* Darozir, Levi, assignor.)					
190,696	Travis, Dudley W., Ithaca, N. Y. Horse hay-rake	May 15, 1877	621	184	11	842
191,193	Travis, Thomas W., assignor of one-half interest to J. A. Pollock, Philadelphia, Pa. Componnd railway-rail	Aug. 14, 1877	426	128	12	298
	Traynor, Patrick. (*See* Higgins & Traynor.)					
197,953	Trayser, Paul, assignor of one-half interest to Wayne Agricultural Company, Richmond, Ind. Cotton-seed planter	Dec. 11, 1877	252	78	12	991
	Treat, Bryan A. (*See* Combs, John H., assignor.)					
191,624	Treat, James E., Boston, Mass. Indicator for bel'ows	June 5, 1877	105	32	11	991
	Treat, Robert M. (*See* Dailey & Treat, assignors)	(Reissue.)				
193,736	Tregoning, John, Brooklyn, N. Y. Steam-valve for pumping-engines	July 31, 1877	1235	370	12	214
192,543	Tremain, Charles W., assignor of one-third interest to C. B. De Forest, Chicago, Ill. Automatic hose-reel	June 26, 1877	1077	325	11	1147
195,691	Tremaine, William B., assignor of one-half interest to L. G. Billings, Brooklyn, N. Y. Upright piano	Sept. 25, 1877	954	285	12	559
	Tremblay, Alexander, *et al.* (*See* Evans, George R., assignor.)					
	Trenton Lock and Hardware Company. (*See* Girard, John, assignor.)					
196,843	Trenwith, William H., New York, N. Y. Traction-wheel	Nov. 6, 1877	106	32	12	776
196,605	Trepus, William H., Chicago, Ill. Liquor shaker and strainer	Oct. 30, 1877	973	282	12	733
188,697	Trevallee, Oscar A., Buffalo, N. Y. Fire-kindler	Mar. 20, 1877	739	226	11	495
	Trevett, Victor, *et al.* (*See* Huerta, Manuel, assignor.)					
	Trickle, John A. J. (*See* Rhoades & Trickle.)					
	Triebels, Charles H. R. (*See* Lilly, William H., assignor.)					
	Trimble, Joseph. (*See* Summers & Trimble.)					
192,544	Trimble, William J., Toledo, Ohio. Car coupling	June 26, 1877	1078	325	11	1147
191,492	Trinks, Gregor, and A. Pramann, New York, N. Y. Button for carriage-curtains	May 29, 1877	1411	425	11	963
189,526	Tripp, George W., Auburn, N. Y., assignor to S. S. White, Philadelphia, Pa. Dental engine	Apr. 10, 1877	509	161	11	633
193,300	Same.....Dental-engine hand-piece	July 17, 1877	773	237	12	132
193,573	Tripp, George W., Auburn, N. Y. Movable partition or screen	July 24, 1877	{105 106}	{317}	12	178
189,815	Tripp, James, Coldwater, Mich. Cotton-picker	Apr. 17, 1877	817	252	11	681
194,852	Same.....Sewing-machine	Sept. 4, 1877	95	30	12	414
194,853	Same.....Revolving-hook sewing-machine	Sept. 4, 1877	96	31	12	414
198,257	Same same	Dec. 18, 1877	589	178	12	1046
187,993	Tripp, Othniel F., Battle Creek, Mich. Knitting-machine needle	Mar. 6, 1877	38	10	11	385
189,970	Tripp, Thomas, East Stoughton, Mass. Water-wheel	Apr. 24, 1877	992	303	11	712
	Tripp, William L. (*See* Kunkle, Adam, assignor.)					
185,988	Trombly, Edward, Maynard, assignor to C. G. Sargent & Son, Granitevillo, Mass. Wool-burring machine	Jan. 2, 1877	172	53	11	31
194,194	Trotter, Charles J., Chicago, Ill. Apparatus for deodorizing gases from rendering-tanks	Aug. 14, 1877	427	129	12	298
	Trottman, Henry, *et al.* (*See* Hefferman, Pierce, assignor.)					
	Trout, Hollis C. (*See* Poole, Lemon, assignor.)					
196,271	Troutman, John H., and W. H. H. Green, Johnson County, Kans., assignor to Green, Troutman & Co. Cooking-stove	Oct. 16, 1877	617	{177 178}	12	663
194,017	Trowbridge, Almarin, jr., Boston, Mass. Organ stop-action	Aug. 7, 1877	219	65	12	264
	Trowbridge, Charles S. (*See* Reynolds, Samuel F., assignor)	(Reissue.)				
186,441	True, Cyrus B., Providence, R. I. Sewing-machine	Jan. 23, 1877	656	201	11	121
187,939	True, David, Salisbury, Mass. Boat-knee	Feb. 27, 1877	1039	319	11	368
195,108	Same.....same	Oct. 9, 1877	227	65	12	601
189,285	True, Hiram L., McConnellsville, Ohio. Parlor-skate	Apr. 3, 1877	257	85	11	592
191,733	True, James P., Poncha Springs, Colo. Convertible chair	June 5, 1877	209	65, 66	11	1005
186,963	True, John A., Marion, Ala. Cotton-seed and corn planter	Feb. 6, 1877	50	17	11	208
	True, Norris E. (*See* Walker, William H. H., assignor.)					
	True, Virgil. (*See* McKinley & True.)					
	True, Younger P. (*See* McAfee & True.)					
193,055	Trueblood, Albert H., Denison, Tex. Mask for horses and cattle	July 10, 1877	511	153	12	90
	Truel, Charles L. (*See* Maurel & Truel.)					
194,484	Truesdell, William H., Elgin, Ill. Combined cane and stool	Aug. 21, 1877	729	217	12	345
187,201	Truitt, Robert H., Rockfield, Ky. Bridle-bit	Feb. 6, 1877	262	86	11	238
190,389	Trumbull, Horace, Ticonderoga, N. Y., assignor to New York Ore Separator Company. Machine for grinding ores	May 1, 1877	275	81	11	782
187,200	Trump, Fuller, Springfield, Ohio. Sectional steam-boiler	Feb. 6, 1877	261	85, 86	11	238
7,938	Trump, Samuel N., Wilmington, Del. Toy scroll-sawing machine	(Reissue.)	Nov. 6, 1877	238	71	12
191,493	Trust, Alexander V., New York, N. Y. Wrench	May 29, 1877	1412	426	11	961
189,527	Truxell, George H., assignor of one-half interest to W. Truxell, Greensburg, Pa. Scroll-sawing machine	Apr. 10, 1877	510	161	11	{633 634}
192,311	Truxell, George H., Greensburg, Pa. Treadle	June 19, 1877	833	253	11	1102
	Truxell, William. (*See* Truxell, George H., assignor.)					
198,258	Tryon, George, Ashtabula, Ohio. Tire-adjuster	Dec. 18, 1877	591	179	12	1046
186,696	Tschantz, Abraham J., Orville, Ohio. Carriage-jack	Jan. 30, 1877	890	278	11	161
188,082	Tucker, Charles B., Lyons, N. Y. Dermopathic instrument	Mar. 6, 1877	117	35	11	396
	Tucker, Charles L. (*See* Tucker, George J. and C. L.)					
	Tucker, George F. (*See* Hamblin, Stephen N., assignor.)					
193,677	Tucker, George J. and C. L., Amesbury, Mass. Jump-seat carriage	July 31, 1877	1185	355	12	207
190,527	Tucker, George W., Waterbury, Conn. Drawer-pull	May 8, 1877	428	125	11	810
196,606	Same same	Oct. 30, 1877	973	283	12	733
186,902	Tucker, Horace N., Stoughton, Mass. Washing-machine	Jan. 30, 1877	1100	311	11	190
	Tucker, John H., *et al.* (*See* Terman, James W., assignor.)					
	Tucker, Stephen D. (*See* Hoe & Tucker.)					
186,384	Tucker, Stephen D., New York, N. Y. Paper-folding machine	Jan. 16, 1877	584	179	11	{99 100}
186,385	Same.....same	Jan. 16, 1877	587	180	11	100
188,987	Same.....Machine for folding paper	Mar. 27, 1877	1010	320	11	545

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
191,494	Tucker, Stephen D., New York, N. Y. Sheet-delivery mechanism for printing-machines	May 29, 1877	1413	426, 427, 428, 429	11	964
191,819	Same.....Folding-machine	June 12, 1877	303	94, 95	11	1021
192,031	Same.....same	June 12, 1877	514	157, 158, 159	11	1049
192,035	Same.....same	June 12, 1877	519	159, 160	11	1050
192,954	Same.....Delivery apparatus for printing-machines	July 10, 1877	415	124, 125	12	77
193,056	Same.....same	July 10, 1877	512	154	12	90
196,502	Same.....Delivering-apparatus for printing-machines	Oct. 23, 1877	857	246, 247, 248	12	765
127,693	Same.....Sheet-delivering apparatus for printing-machines	Nov. 27, 1877	1042	302, 303, 304, 305, 306	12	933
197,694	Same.....same	Nov. 27, 1877	1023	306, 307, 308	12	933
197,700	Same.....same	Nov. 27, 1877	1034	311, 312	12	934
185,876	Tucker, Theodore M., Newark, N. J. Fluting-machine	Jan. 2, 1877	61	19	11	16
	Tucker, William. (*See* Andrews & Tucker) (Reissue.)					
191,903	Tudor, Joseph D., assignor of one-half interest to W. B. Hamm, Philadelphia, Pa. Milk-can	June 12, 1877	382	118	11	1032
191,270	Tudor, Robert M., Philadelphia, Pa. Ornamental window-glass	May 29, 1877	1204	361	11	937
197,954	Tuerk, Frederick W., jr., Chicago, Ill. Water-motor	Dec. 11, 1877	253	78	12	991
193,057	Tufts, William H., Howard County, Md. Scroll-sawing machine	July 10, 1877	514	155	12	90
186,641	Tull, James, La Fayette, Ind. Churn	Jan. 23, 1877	838	259	11	146
7,906	Tullock, James, Jamestown, Cal., assignor, by mesne assignments, to F. Ogden. Ore-stamp feeder. (Reissue)	Oct. 9, 1877	391	112	12	624
189,073	Tully, Thomas, Springfield, Ill., assignor to self and W. H. Doan, Cleveland, Ohio. Cork-stopper or bung for cans, barrels, &c	Apr. 3, 1877	57	21	11	567
197,001	Tully, Thomas, Springfield, Ill. Apparatus for the manufacture of illuminating-gas.	Nov. 13, 1877	282	83	12	808
189,400	Tumy, Hiram L., Cincinnati, Ohio. Circular valve for steam-engines	Apr. 10, 1877	397	126	11	618
	Tupper, Charles. (*See* Pierce, Samuel H., assignor.)					
	Tupper, Francis L., *et al.* (*See* Chandler, Joel B., assignor.)					
189,971	Tupper, William H., assignor to A. N. Titus, New York, N. Y. Manufacturing illuminating-gas	Apr. 24, 1877	994	304	11	713
189,669	Turbeville, Ewing C., assignor of one-half interest to G. S. Shryock, Saint Louis, Mo. Bottle-washer	Apr. 17, 1877	673	208	11	663
	Turek, Fenton B. (*See* Köhler & Turek.)					
195,057	Tures, George N., Lyons, assignor of one-third interest to F. Lindmeier, Clinton County, Iowa. Wagon-tongue	Sept. 11, 1877	314	95	12	451
7,711	Turley, Marshall, Council Bluffs, Iowa. Horse-collar (Reissue)	May 29, 1877	1451	436	11	967
193,575	Same.....Hame	July 24, 1877	1059	317	12	179
194,979	Same.....Horse-collar	Sept. 11, 1877	235	72	12	440
196,774	Turley, Marshall, assignor of one-third interest to J. A. Churchill, Council Bluffs, Iowa. Plow	Nov. 6, 1877	36	10	12	766
197,065	Turley, Marshall, Council Bluffs, Iowa, assignor of one-half interest to S. J. Hanna, Chicago, Ill. Draft attachment for wagons	Nov. 13, 1877	347	102	12	818
189,816	Turnbull, Alex., Glasgow, Scotland. Safety-valve	Apr. 17, 1877	818	253	11	681
	Turnbull, Andrew. (*See* Gerard & Turnbull.)					
193,576	Turnbull, Andrew, assignor to Landers, Frary & Clark, New Britain, Conn. Weighing-scales	July 24, 1877	1060	318	12	179
	Turnbull, Luke. (*See* Gleason, Robert E., assignor.)					
195,733	Turnbull, Robert B., Cleveland, Ohio. Keg for white lead, paint, &c	Oct. 2, 1877	44	13	12	567
	Turner and Seymour Manufacturing Company. (*See* Brothwell, John G., assignor.)					
192,546	Turner, Charles, Lynn, assignor to M. H. Morriam and E. L. Norton, Boston, Mass. Presser-foot for sewing-machines	June 26, 1877	1081	326	11	1147
187,910	Turner, David W., Saint Louis, Mo. Machine for setting saws	Feb. 27, 1877	1039	320	11	368
192,545	Turner, Edward H., Chicago, Ill. Foot-rest and seat for velocipedes	June 26, 1877	1080	326	11	1147
195,676	Turner, Edouard A., Brooklyn, N. Y. Furniture-spring	Sept. 25, 1877	941	281	12	557
189,884	Turner, Grant B., Cuyahoga Falls, Ohio. Grain-separator	Apr. 24, 1877	914	279	11	702
197,502	Turner, James A., and J. T. Stoneham, West Gorton, England; said Stoneham, assignor to said Turner. Apparatus for the manufacture of paper for packing goods, &c.	Nov. 27, 1877	824	245, 246	12	905
197,911	Turner, James J., assignor of one-half interest to J. F. Miller, Richmond, Ind. Padlock	Dec. 4, 1877	905	62	12	975
198,713	Same.....same	Dec. 25, 1877	1032	314	12	1120
197,301	Turner, James L., New York, N. Y. Waste-pipe trap	Nov. 20, 1877	601	179	12	863
187,068	Turner, James W., Boston, Mass. Business check-book	Feb. 6, 1877	143	47	11	222
	Turner, John, *et al.* (*See* Fergnson, James, assignor.)					
197,299	Turner, John, Boston, Mass. Tie for street-railway tracks	Nov. 20, 1877	600	178	12	863
197,300	Same.....same	Nov. 20, 1877	601	178	12	863
	Turner, Joseph, *et al.* (*See* Broseker, William, assignor.)					
191,387	Turner, Joseph S., Rockland, Mass. Manufacture of boots and shoes	May 29, 1877	1300	394	11	950
	Turner, Josiah S., *et al.* (*See* Clayton, Henry, assignor.)					
194,275	Turner, Reuben D., Philadelphia, Pa. Process and apparatus for cleaning and purifying oil, grease, &c	Aug. 14, 1877	504	153	12	308
	Turner, Santford. (*See* Turner, Thomas N. and S.)					
7,459	Turner, Sidney S., Westborough, Mass., assignor, by mesne assignments, to American Straw Sewing Machine Company. Sewing-machine (Reissue)	Jan. 9, 1877	375	115, 116	11	66
188,698	Turner, Thomas N. and S., Rushville, Ind. Ditching-machine	Mar. 20, 1877	739	227	11	495
187,572	Turner, William B., Barnhart's Mills, Pa. Pump for oil-wells	Feb. 20, 1877	656	204	11	309
197,302	Turner, William B., assignor to W. and W. Menzies, jr., New York, N. Y. Shutter	Nov. 20, 1877	602	179	12	863
185,877	Turnstill, William, Brooklyn, N. Y. Nut-lock	Jan. 2, 1877	62	19	11	16
195,967	Turquand, William M. G., Pimlico, England. Apparatus for securing sheep to be sheared	Oct. 9, 1877	290	81	12	610
	Turrell, M. J. (*See* Rice, Fred. B., assignor.)					
196,316	Turrettini, Theodore B. E., Geneva, Switzerland. Treating water to produce clear ice.	Oct. 23, 1877	675		12	620

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
	Turton, William. (*See* Keyser & Turton.)					
190,647	Turver, Charles H., assignor, by mesne assignments, to S. Turver, Rochester, N. Y. Saw-set	May 8, 1877	554	165	11	827
	Turver, Stella. (*See* Turver, Charles H., assignor.)					
196,607	Tutewiler, John W., Indianapolis, Ind. Fire-escape	Oct. 30, 1877	974	283	12	734
188,209	Tuttle, Bronson B., Naugatuck, Conn., assignor to Ewart Manufacturing Company. Chicago, Ill. Link for drive-chains	Mar. 6, 1877	247	77	11	412
197,750	Tuttle, Edward A., New York, assignor of one-half interest to S. Tuttle, jr., Brooklyn, N. Y. Health-lift	Dec. 4, 1877	45	14	12	952
	Tuttle, George R. (*See* Conover, George M., assignor.)					
	Same.....(*See* Ferron, Charles A., assignor.)					
191,271	Tuttle, Hiram H., assignor of one-half interest to F. Field, San José, Cal. Pump-plunger	May 29, 1877	1205	362	11	937
	Tuttle, Samuel I. (*See* Daniels & Tuttle.)					
	Tuttle, Silas, jr. (*See* Tuttle, Edward A., assignor.)					
190,300	Tuttle, Warren C., assignor to Rice, Barton & Fales Machine and Iron Company, Worcester, Mass. Pulp-dresser for paper-machines	May 1, 1877	276	81	11	782
189,401	Tweddle, Herbert W. C., Pittsburg, Pa. Petroleum products and method of obtaining the same	Apr. 10, 1877	397		11	618
189,402	Same.....same	Apr. 10, 1877	398		11	618
193,430	Tweedle, William B, assignor of one-half interest to C. T. Cady, Providence, R. I. Faucet	July 24, 1877	915	278	12	160
196,272	Tyer, George A., and W. J. Horne, San Francisco, Cal. Elastic truss	Oct. 16, 1877	618	178	12	663
188,443	Tyler, Aaron J., Buffalo, N. Y. Pump	Mar. 13, 1877	489	151 152	11	452
196,273	Tyler, Alfred C., Philadelphia, assignor of one-half interest to T. T. Wing, Susquehanna, Pa. Belt-fastening	Oct. 16, 1877	619	179	12	663
186,964	Tyler, John B., Brooklyn, assignor of one-half interest to S. L. Bergstraser, Long Island City, N. Y. Toy gun	Feb. 6, 1877	51	17	11	208
188,831	Tyler, John T., Pittsburg, Pa. Shovel	Mar. 27, 1877	891	271	11	524
191,201	Tyler, Leman W., Theresa, N. Y. Machine for bending, upsetting, and cutting tires	May 22, 1877	1119	335	11	917
7,927	Tyler, Philos B., W. M. Chandler, and L. F. Standish, assignors to G. Selden, Erie, Pa. Pocket lighting device.....(Reissue)	Oct. 23, 1877	884	255	12	708
7,928	Same.....Gas-lighting device.....(Reissue)	Oct. 23, 1877	886	255	12	708
	Tyler, William W. (*See* Risdon & Tyler.)					
195,186	Tyner, William L., Standford, Ill. Implement for laying tile	Sept. 11, 1877	448	133	12	471
	Typographical Machine Printing Company. (*See* Morgan, George H., assignor.)					
193,577	Tyrrell, Asahel, H. Fowler, and S. Evans, Niles, Ohio. Nail-plate feeder	July 24, 1877	1060	318	12	179
196,513	Tyrrell, Asahel H., and S. Evans, Trumbull County, Ohio. Nail-plate feeder	Oct. 23, 1877	872	251	12	707
	Tyrrel, Robert A. (*See* Armstrong & Tyrrel.)					
189,528	Tyson, Bryan, Washington, D. C. Combined washer and amalgamator	Apr. 10, 1877	511	162	11	634
196,844	Tyson, Charles, Philadelphia, Pa. Water-tube boiler	Nov. 6, 1877	107	32	12	776
	Tyson, James R. (*See* Tyson, William F., assignor.)					
194,387	Tyson, Thomas H., Washington Court-house, Ohio. Weather-strip	Aug. 21, 1877	625	188	12	332
187,941	Tyson, William F., assignor of one-half interest to J. R. Tyson, Reading, Pa. Screw-propeller	Feb. 27, 1877	1040	320	11	568
192,884	Ubil, Taylor, assignor of one-half interest to T. R. Brown, Philadelphia, Pa. Mouth-piece and lid for gas-retorts	July 10, 1877	352	104	12	68
	Uebele, Conrad. (*See* Will & Uebele.)					
191,202	Uhlich, Samuel, Mansfield, Ohio. Soldering-apparatus	May 22, 1877	1120	335	11	918
198,714	Uibel, George, New York, N. Y. Broom-support	Dec. 25, 1877	1053	314	12	1120
189,972	Uller, Clemens, and J. N. Bennett, Columbus, Ohio. Steering-propeller	Apr. 24, 1877	995	304	11	713
7,925	Ulmer, Philip, Philadelphia, Pa., assignor, by mesne assignments, to H. C. Milligan, Elizabeth, N. J. Camp-spoon.....(Reissue)	Oct. 23, 1877	881	254	12	708
	Unanue, Pedro. (*See* Gorriti & Unanue.)					
	Underhill, Andrew M. (*See* Redden, Henry, assignor.)					
	Same.....same.....(Reissue.)					
196,503	Underhill, Gilbert, Philadelphia, Pa. Spring motor	Oct. 23, 1877	862	248	12	705
186,181	Underwood, Benoni F., Brooklyn, N. Y. Game apparatus	Jan. 9, 1877	364	111	11	65
198,333	Underwood, Charles M., New York, N. Y. Button-fastener	Dec. 18, 1877	641	195	12	1054
186,386	Underwood, Erastus C., Boston, Mass. Weather-strip	Jan. 16, 1877	589	180	11	100
186,508	Same.....same	Jan. 23, 1877	711	218	11	129
192,200	Same.....Window-screen	June 19, 1877	704	216	11	1086
186,965	Underwood, Frank H. and J. E., Brooklyn, N. Y. Belting	Feb. 6, 1877	51	18	11	208
196,131	Underwood, Henry M., Kenosha, Wis., and W. P. Holliday, Detroit, Mich.; said Underwood assignor to said Holliday. Match-splint machine	Oct. 16, 1877	475	138	12	643
	Underwood, James E. (*See* Underwood, Frank H. and J. E.)					
7,865	Underwood, John K., Anoka, Minn. Rotary gang-plow.....(Reissue)	Aug. 28, 1877	1008	299 300	12	392
190,933	Underwood, John K., assignor of one-half interest to W. J. Morse, Geneva, N. Y. Gage	May 15, 1877	842	250	11	872
194,195	Underwood, John L., Smithfield, Va. Pea-nut thrasher	Aug. 14, 1877	427	129	12	298
186,903	Underwood, Jonathan W., Aurora, Ill. Coal-oil stove	Jan. 30, 1877	1101	341	11	190
187,494	Underwood, Joseph B., assignor of one-half interest to W. A. Whitehead, Fayetteville, N. C. Temporary binder	Feb. 20, 1877	589	183	11	300
196,274	Underwood, Joseph B., Fayetteville, N. C. Combined coffee roaster and cooler	Oct. 16, 1877	619	179	12	663
	Underwood, Nathan. (*See* Becker, Henry P., assignor).....(Reissue.)					
193,678	Unger, Hiram, Germantown, Ohio. Gate-latch	July 31, 1877	1186	355	12	207
	Union Comb Company. (*See* Tisdale, Stephen A., assignor.)					
	Union Manufacturing Company. (*See* Johnson, Moses, assignor.)					
	Union Paper Bag Machine Company. (*See* Amazeeo, Christopher, assignor) (Reissue.)					
	Union Wire Mattress Company. (*See* Franklin, Francis B., assignor).....(Reissue.)					
	Same.....(*See* Powers, David J., assignor).....(Reissue.)					
	United States Barrel and Stave Company. (*See* Goodell, Oliver D., assignor.)					
	United States Gold and Silver Amalgamating Company. (*See* Crosby, Augustine B., assignor.)					
	United States Ice and Refrigerating Company. (*See* Ballantine, Alexander T., assignor.)					
187,433	Unkrich, Gustave A., Fairfield, Iowa. Ventilator	Feb. 13, 1877	517	159	11	283
187,942	Untermeyer, David, New York, N. Y. Baggage-check guard	Feb. 27, 1877	1040	320	11	369
189,973	Updegraff, Horace, Smithfield, Ohio. Breech-loading firm-arm	Apr. 24, 1877	996	304 305	11	713
192,607	Upham, Andrew J., Sterling, assignor to R. Elwood, Sycamore, Ill. Harrow	July 3, 1877	52	15	12	19

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
198,475	Upham, Andrew J., assignor of two-thirds interest to J. H. Lawrence and C. G. Betts, Sterling, Ill. Wheelbarrow	Dec. 25, 1877	805	244	12	1087
	Upham, Samuel C. (*See* Don, Christopher C., assignor.)					
192,354	Upp, William W., Columbia, Pa. Apparatus for generating illuminating gas	June 26, 1877	896	268	11	1122
185,989	Upson, Thomas C., Waterbury, Conn. Key-fastener	Jan. 2, 1877	173	53	11	31
	Upton, Albert F. (*See* Jarvis, Kingsbury M., assignor.)					
	Upton, Francis C. (*See* Babcock & Upton.)					
	Upton, George, *et al.* (*See* Hargreaves, George, assignor) (Reissue.)					
188,210	Upton, James S., Battle Creek, Mich. Grain-separator	Mar. 6, 1877	247	77	11	412
	Upton, William. (*See* Spurr & Upton.)					
196,608	Urban, Herman, Cincinnati, Ohio, and G. Berkmyer, Covington, Ky. Fire and burglar proof safe	Oct. 30, 1877	975	283	12	734
196,725	Urban, Herman, assignor to Macneale & Urban, Cincinnati, Ohio. Fire-proof safe	Oct. 30, 1877	1090	317	12	749
198,324	Same. Arbor for safe-locks	Dec. 18, 1877	641	195	12	1054
190,100	Urei, William T., assignor to self and A. Bettes, Warrenburg, Mo. Spark-arrester	Apr. 24, 1877	1141	347	11	731
189,155	Urner, Lewis H., Nevada, Mo. Machine for stamping leather goods	Apr. 3, 1877	124	44	11	576
	Ustick, H. P. (*See* Johnson, William H., assignor.)					
	Utter, Charles C. (*See* Merrill & Utter.)					
197,503	Utter, Morris L., Rockford, Ill. Cultivator	Nov. 27, 1877	826	246, 247	12	905
191,625	Vahldieck, Andreas, Johnsonville, Wis. Straw-cutter	June 5, 1877	107	33	11	991
196,501	Vaile, Charles A., assignor to J. M. Rice, Worcester, Mass. Ventilator and chimney-cap	Oct. 23, 1877	863	249	12	705
192,547	Vaile, Robert, Auckland, New Zealand. Rotary engine	June 26, 1877	1082	326, 327	11	1147
	Vaill, Edward W. (*See* Wakefield, John E., assignor.)					
187,787	Vaill, Edward W., Worcester, Mass. Folding-chair	Feb. 27, 1877	889	277	11	349
187,059	Vale, Charles L., Beloit, Wis. Cracker-machine	Feb. 6, 1877	143	48	11	222
	Valentine, Abram S., *et al.* (*See* Pruner, David I., assignor.)					
186,907	Valentine, Alfred A., New York, and H. A. Morrison, Brooklyn, N. Y. Umbrella rib-tip	Jan. 30, 1877	1107	342	11	191
192,799	Valentine, Charles J., Belvidere, N. J. Vehicle-hub	July 3, 1877	245	71	12	45
194,938	Same. Wagon-axle box	Sept. 4, 1877	183	56	12	425
	Valentine, George, *et al.* (*See* Pruner, David I., assignor.)					
187,434	Valentine, Samuel W., Bristol, Conn., assignor to B. F. Brown, Newton, Mass. Blacking-box	Feb. 13, 1877	518	159	11	283
	Vallentine, Edward. (*See* Vallentine, John G., assignor.)					
190,262	Vallentine, John G., assignor to E. Vallentine, Boston, Mass. Apparatus for weighing liquids	May 1, 1877	146	43	11	765
192,835	Van Alstine, Charles W., Chelsea, Mass. Device for attaching labels to plug-tobacco	July 10, 1877	354	104	12	68
195,968	Van Alstine, James J., Bristol, Wis. Feather-renovator	Oct. 9, 1877	291	82	12	610
194,882	Van Alstyne, Lawrance, Sharon, Conn. Registering ballot-box	Sept. 4, 1877	124	38	12	418
194,628	Van Altena, Henry, Milwaukee, Wis. Chromatrope toy	Aug. 28, 1877	865	258	12	374
192,851	Van Arnum, Jacob H., Kendallville, Ind. Clothes-basket	July 10, 1877	523	95	12	64
	Van Brunt, D. C., *et al.* (*See* Van Brunt, George W., assignor) (Reissue.)					
7,839	Van Brunt, George W., assignor, by mesne assignments, to W. A. Van Brunt, S. E. Davis, R. S. Barber, and D. C. Van Brunt, Horicon, Wis. Seeding-machine (Reissue)	Aug. 7, 1877	240	70, 71	12	266
	Van Brunt, Willard A., *et al.* (*See* Van Brunt, George W., assignor) (Reissue.)					
7,466	Van Brunt, Willard A., Horicon, Wis. Seeder and cultivator (Reissue)	Jan. 16, 1877	611	187	11	103
7,604	Same. same	Apr. 10, 1877	545	170	11	638
195,858	Van Brunt, Willard A., and S. E. Davis, Horicon, Wis. Force-feed seeding-machine	Oct. 2, 1877	167	47	12	585
190,648	Van Buren, Jafew S., West Troy, and R. Z. Liddle, Albany, N. Y. Cooking-stove	May 8, 1877	555	165	11	827
196,845	Vance, Eliza A., Gallipolis, Ohio. Tucker	Nov. 6, 1877	168	33	12	776
196,317	Van Cott, Daniel P., Brooklyn, N. Y. Door for elevator-hatchways	Oct. 23, 1877	676	195	12	680
188,699	Van Court, Robert A., Philadelphia, Pa. Privy-seat	Mar. 20, 1877	740	227	11	495
194,196	Vandawater, Elias, Rockville, Ill. Harrow	Aug. 14, 1877	428	129	12	298
187,331	Vandecar, Bennett, Canajoharie, and H. V. Harper, Albany, N. Y. Steam-trap and boiler-feeder	Feb. 13, 1877	417	131	11	271
195,466	Vandegrift, Andrew J. Valve-gear for steam-engines	Sept. 25, 1877	743	219, 220	12	529
	Vandegrift, George A. (*See* Ross, Simon, assignor.)					
	Vandegrift, John H. (*See* Disston & Vandegrift.)					
189,403	Van De Mark, Edward B., New York, N. Y. Portable oven	Apr. 10, 1877	399	126	11	618, 619
	Vanderbilt, W. W. (*See* Craw, Erastus H., assignor.)					
	Vanderford, James D. (*See* Seybold, Frederick J., assignor.)					
188,212	Vander Linden, William F., and H. C. King, Brooklyn, N. Y. Canceling-ink	Mar. 13, 1877	249		11	413
	Van Derveer & Holmes Biscuit Company. (*See* Holmes, Daniel M., assignor.)					
	Van Derzee, Cornelius, *et al.* (*See* Thorne, Sylvester L., assignor.)					
187,786	Van Derzee, John M., New Baltimore, N. Y. Wagon-brake	Feb. 27, 1877	888	277	11	348
195,857	Same. Bale-tie	Oct. 2, 1877	166	46	12	584
	Van Deusen & Son, L. S. (*See* Morand, William J., assignor.)					
	Van Deventer, William. (*See* Jones, Theodore J., assignor.)					
196,318	Van Dolsen, Augustus F., Chicago, Ill. Weather-strip	Oct. 23, 1877	678	195	12	680
194,854	Van Dorn, Ferdinand, Basking Ridge, N. J. Cotton-harvester	Sept. 4, 1877	97	31	12	414
189,543	Van Dorn, James H., Cleveland, Ohio. Iron fence	Apr. 10, 1877	533	167	11	636
192,099	Van Doren, Henry, South Branch, N. J. Meat-chopper	June 19, 1877	602	183	11	1073
194,277	Van Doren, Lansing, Washington, D. C. Breast-pin tongue	Aug. 14, 1877	507	153	12	308
196,726	Same. Dial-fastening for watches	Oct. 30, 1877	1091	317	12	750
187,739	Van Dusen, John D., Auburn, N. Y. Grain-separator	Feb. 27, 1877	841	262	11	342
191,495	Van Dyke, John M., Mason, Ohio. Fire-extinguisher for car-stoves	May 29, 1877	1425	429	11	961
189,529	Van Eps, Henry R., Peoria, Ill. Wire fabric	Apr. 10, 1877	515	162	11	634
194,793	Van Etten, Daniel S., Richmond, Ind. Curtain-fixture	Sept. 4, 1877	39	13	12	406
192,798	Van Geasen, Halmeagh, Paterson, N. J. Machine for making wired tickets	July 3, 1877	243	71	12	45
	Van Horn, Abner, *et al.* (*See* Van Horn, Andrew, assignor.)					
188,990	Van Horn, Abner, assignor of two-thirds interest to A. Van Horn and H. Baragwanath, Brooklyn, N. Y. Steam-generator	Mar. 27, 1877	1044	321	11	546
189,974	Van Horn, Albert E., Sebewaing, Mich. Knife and fork cleaner	Apr. 24, 1877	999	305	11	713
	Van Horn, Andrew. (*See* Drake, Jacob, assignor.)					
188,989	Van Horn, Andrew, assignor of two-thirds interest to A. Van Horn and H. Baragwanath, Brooklyn, N. Y. Ventilator for chimneys	Mar. 27, 1877	1043	321	11	545
195,422	Van Horn, James F., Corsicana, Tex. Bee-hive	Sept. 18, 1877	685	203	12	513
191,496	Van Hoesen, Charles R., New York, N. Y. Coasting-sled	May 29, 1877	1426	430	11	964
7,922	Van Hoesen, Eugene M., and N. H. Brown, Syracuse, N. Y. Car-coupling (Reissue)	Oct. 23, 1877	879	253	12	707
197,504	Van Hoerenbergh, Henry, Elizabeth, N. J. Parlor croquet apparatus	Nov. 27, 1877	828	247	12	905

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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197,516	Vanier, Zéphirin, Westborough, Mass. Brick-machine	Nov. 27, 1877	899	267, 268	12	916
186,443	Van Kannel, Theophilus, and C. F. Rapp, Cincinnati, Ohio; said Van Kannel assignor to said Rapp. Reversible-hinge slate	Jan. 23, 1877	658	202	11	122
189,074	Vankeuren, Charles E., Wheeling, W. Va. Corn-ball presser	Apr. 3, 1877	58	21	11	567
197,186	Van Keuren, William F., Buffalo, N. Y., assignor of one-fourth interest to Pratt & Letchworth. Harness-buckle	Nov. 13, 1877	474	140	12	836
	Van Lew, E. L. (*See* Jenkins, Wilton F., jr., assignor.)					
187,943	Van Loen, Nicholas, Saint Cloud, Minn. Machine for making wire-rope	Feb. 27, 1877	1041	320	11	369
188,444	Same.....Lightning-rod	Mar. 13, 1877	490	152	11	452
190,391	Same.....same	May 1, 1877	277	81	11	782
191,734	Van Matre, Joseph, Cadiz, Ind. Blacksmiths' tongs	June 5, 1877	209	66	11	1005
194,276	Vann, John A., Belvidere, N. C. Reversible plow-hook	Aug. 14, 1877	507	153	12	308
187,682	Vannice, Peter T., Galesburg, Ill. Blackboard-rubber	Feb. 20, 1877	762	236	11	523
197,303	Van Nüys, Thomas C., Bloomington, Ind. Preventing fraud in stamps, checks, bonds, &c	Nov. 20, 1877	606		12	864
196,727	Van Orden, John M., New York, N. Y. Corset	Oct. 30, 1877	1091	317	12	750
192,036	Vanosdol, Madison, Ivanhoe, Mo. Post-driver	June 12, 1877	521	161	11	1050
	Van Ostrander, David. (*See* Blackmer, Ringer & Van Ostrander.)					
	Van Patten, Frederick. (*See* Clapp & Van Patten.)					
194,503	Van Pelt, John K., and W. Lee, assignors to selves and W. H. Elliott, Texarkana, Ark. Direct-acting force-pump	Aug. 21, 1877	745	222	12	347
190,101	Van Pelt, John S., jr., Evergreen, Va., assignor of one-half interest to A. H. Greene, Brooklyn, N. Y. Car-starter	Apr. 24, 1877	1142	348	11	731
194,485	Van Riper, Isaac, Long Island City, N. Y. Manger	Aug. 21, 1877	729	217	12	345
	Van Sands, George, *et al.* (*See* Sperry, Alfred W., assignor.)					
7,681	Van Sickle, Garrett, Shortsville, N. Y. Hay-elevator (Reissue)	May 15, 1877	866	257	11	875
192,955	Van Skelline, Cornelius, Brooklyn, N. Y. Butter-dish	July 10, 1877	418	125	12	78
187,495	Van Skelline, Isabella J., Brooklyn, N. Y. Wrapper for bon-bons	Feb. 20, 1877	590	183	11	301
192,201	Same..... Dyeing tissue and bon-bon papers	June 19, 1877	705		11	1086
195,058	Van Slyck, Christopher, and H. S. De Forest, Schenectady, N. Y. Striping-machine	Sept. 11, 1877	315	95	12	451
	Van Slyck, Henry. (*See* Vosburgh & Van Slyck.)					
187,202	Van Stavoren, Samuel J., Philadelphia, Pa. Broom-holder	Feb. 6, 1877	263	86	11	238
186,904	Vanstone, Samuel, and J. W. Heard, Providence, R. I. Manufacture of screen-threaded rods	Jan. 30, 1877	1102	341	11	190
186,905	Vanstone, Samuel, assignor of one-half interest to J. W. Heard, Providence, R. I. Machine for making screw-blanks	Jan. 30, 1877	1103	341, 342	11	190
186,906	Same.....Machine for making screw-threaded stock	Jan. 30, 1877	1105	342	11	190, 191
191,203	Van Syckel, Samuel, Titusville, Pa. Continuous distillation and apparatus therefor	May 22, 1877	1121	335, 336	11	918
191,204	Same.....Oil-stills	May 22, 1877	1125	336	11	918
	Van Tine, Abram. (*See* Van Pine, Charles M., assignor.)					
191,205	Van Tine, Charles M., assignor to A. Van Tine, Matteawan, N. Y. Fluid-meter	May 22, 1877	1126	337	11	918
188,989	Vantrump, Abraham, West Elkton, Ohio. Water-elevator	Mar. 27, 1877	1043	321	11	548
196,514	Van Wagenen, Willis, Boston, Mass. Metal shoe-tip	Oct. 23, 1877	873	251	12	707
188,319	Van Wagoner, Cornelius S., New York, N. Y. Spring-hinge	Mar. 13, 1877	363	114	11	435
186,773	Van Wicklen, Daniel, assignor to self, F. Lenz, and A. Brauns, Green Bay, Wis. Apparatus for bunching brooms	Jan. 30, 1877	970	301	11	174
192,202	Van Wie, James J., assignor of one-half interest to W. P. Allen, Dubuque, Iowa. Chimney-top	June 19, 1877	706	216, 217	11	1087
194,507	Van Wie, James J., assignor to self, W. P. Allen, and G. A. Fifield, Dubuque, Iowa. Fire-escape	Aug. 21, 1877	749	224	12	348
	Van Winkle, Edward. (*See* Coons & Van Winkle.)					
192,396	Van Winkle, Isaac S., San Francisco, Cal. Tuyere	June 26, 1877	940	281	11	1128
194,315	Same.....Railway-car	Aug. 21, 1877	500	168	12	323
193,101	Van Wormer, Matthew, Dayton, Ohio. Dumping-car	July 17, 1877	575	173	12	106
197,696	Vanwormer, William H., assignor of two-thirds interest to C. Parker and G. W. Hayes, Pierceton, Ind. Counter-support for boots and shoes	Nov. 27, 1877	1031	309	12	933
	Van Wyck, Theodorus J., *et al.* (*See* Cheney & Butterfield, assignors.)					
195,188	Varian, Samuel T., Plainfield, N. J. Bell-pull	Sept. 11, 1877	449	134	12	471
188,211	Varney, Edwin, Leavenworth, Kans. Hot-air furnace	Mar. 6, 1877	248	78	11	413
197,695	Varney, George A., Rockland, assignor of one-half interest to J. A. B. Wolven, Flat Rock, Mich. Door-fastening	Nov. 27, 1877	1030	308	12	933
195,546	Varon, Joseph, Union City, Ind. Device for adjusting piston-packing	Sept. 25, 1877	816	242	12	540
	Varwig, Henry. (*See* Franzmann, Jacob, assignor.)					
193,301	Vassar, Matthew, 2d, Ballston Spa, N. Y. Ratchet-wrench	July 17, 1877	774	237	12	132
185,878	Vassie, William, Hamilton, Ontario, Canada. Lamp-bracket for sewing-machine tables	Jan. 2, 1877	62	19	11	17
190,934	Vaughan, George W., Covington, Ky. Carpenters' gage	May 15, 1877	844	250	11	872
185,990	Vaughan, Leonard, Boston, Mass. Vehicle device for checking horses	Jan. 2, 1877	174	53, 54	11	31
	Vaughan, Phineas W. (*See* Glidden & Vaughan.)					
	Same.....same.....(Reissue.)					
195,187	Vaughan, Stephen K., Morrisville, Vt. Animal-trap	Sept. 11, 1877	448	134	12	471
188,832	Vaughan, Thomas, Boston, Mass. Show-case	Mar. 27, 1877	892	271	11	525
198,058	Vaughn, Walter W., and S. Jackson, Stockton, Cal. Well-boring apparatus	Dec. 11, 1877	351	109	12	1006
	Veach, Joshua S., *et al.* (*See* Myers, Teoter H., assignor.)					
196,170	Vedder, David H., Cicero, N. Y. Churn	Oct. 16, 1877	509	148	12	648
	Veit & Nelsen. (*See* Pic & Nelsen, assignors.)					
188,083	Velez, George S., New York, N. Y. Slate	Mar. 6, 1877	118	35	11	396
190,935	Velie, Henry C., Poughkeepsie, N. Y. Horse hay-rake	May 15, 1877	845	250	11	872
193,578	Same.....same	July 24, 1877	1062	318	12	179
196,955	Vellacott, James R., Buffalo, N. Y. Tension attachment for scroll-saws	Nov. 6, 1877	225	67	12	791
188,991	Venable, Edward C., Petersburg, Va. Marking plug-tobacco	Mar. 27, 1877	1045	321	11	546
195,423	Vent, Charles F., Cincinnati, Ohio. Liquid-filter	Sept. 18, 1877	686	203, 204	12	513
189,975	Verckler, Joseph J., Chico, Cal. Wagon-loader	Apr. 24, 1877	1000	305, 306	11	713
189,976	Same.....Platform-scales	Apr. 24, 1877	1000	306	11	713
196,401	Vermillion, John W., Elk Ridge Landing, assignor to C. E. Brown, Baltimore, Md. Pipe-wrench	Oct. 23, 1877	756	218	12	692
189,286	Vermilya, Leland D., assignor of one-half interest to H. Webbert, Dayton, Ohio. Lightning-rod	Apr. 3, 1877	259	86	11	592
	Vermont Farm Machine Company. (*See* Butler, Francis G., assignor.)					
193,058	Vernon, James, Newton Stewart, Scotland. Receptacle for toilet articles	July 10, 1877	515	155	12	90

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
189,075	Vernon, Tinsley, Charleston, Mo., assignor to J. Hisey, Waynesville, Ohio. Nut-lock	Apr. 3, 1877	58	22	11	567
192,312	Verree, John P., Philadelphia, Pa. Bale-tie	June 19, 1877	833	253	11	1102
194,939	Same.....same	Sept. 4, 1877	181	56, 57	12	425
190,263	Very, Edward W., Annapolis, Md. Signal-cartridge	May 1, 1877	146	43	11	765
197,531	Vetter, John, Springfield, Ohio. Combined lock and latch	Nov. 27, 1877	857	255	12	910
194,316	Vickars, James H., Denver, Colo. Railway-gate	Aug. 21, 1877	561	169	12	323
	Vickers, A. H., *et al.* (*See* Kennard, Jesse D., assignor.)					
	Vickers, John. (*See* Townsend & Vickers.)					
	Vickers, T. C., *et al.* (*See* Kennard, Jesse D., assignor.)					
192,852	Victory, Charles H., assignor of one-half interest to A. P. Adams, Albany, N. Y. Wire bale-tie	July 10, 1877	324	95	12	64
192,853	Same.....Snow-shovel	July 10, 1877	324	95	12	64
193,302	Vieira, Manuel J., Indianapolis, Ind., assignor of one-third interest to F. Thompson, San Francisco, Cal. Street-guide	July 17, 1877	775	237	12	133
7,603	Viets, Ellen B., Boston, Mass. Steaming and drying apparatus for shaping pantaloons (Reissue.)	Apr. 10, 1877	544	169	11	638
195,467	Same.....Apparatus for shaping pantaloons	Sept. 25, 1877	745	220	12	529
194,197	Villaret, Auguste, New York, N. Y. Tobacco-package	Aug. 14, 1877	429	130	12	298
	Vinton, Charles E., *et al.* (*See* Sheets, James D., assignor.)					
190,102	Vinton, John J., Sharon, Pa. Harrow	Apr. 24, 1877	1145	349	11	732
	Vitrified Wheel and Emery Company. (*See* Esty, William, assignor.)					
198,059	Vitt, Adolphus H., Union, Mo. Grain-teller	Dec. 11, 1877	353	110	12	1006
193,133	Vivarttas, Aloha, assignor to Central Propelling Company, New York, N. Y. Rotary steam-engine	July 17, 1877	602	182	12	109
194,745	Vivion, David R., McCredie, Mo. Corn-planter	Aug. 28, 1877	982	291	12	389
197,187	Voege, August, Brooklyn, N. Y. Door-securer	Nov. 13, 1877	475	140	12	837
	Voelcker, Theodore, *et al.* (*See* Barker, Robert F., assignor.)					
	Voelm, John. (*See* Huth, John, assignor.)					
	Voelter, Henry, Heidenheim, Germany. Reducing wood to paper-pulp..(Extension.)	Aug. 29, 1877				
189,817	Vogeley, Alex., Brooklyn, N. Y. Stone and glass polishing machine	Apr. 17, 1877	820	253	11	681
194,388	Vogelsang, Charles, Round Top, Tex. Garden-pump	Aug. 21, 1877	626	188	12	332
192,355	Vogler, Herman, Chicago, Ill. Trunk-catch	June 26, 1877	897	269	11	1123
196,956	Voigt, Hermann, Milwaukee, Wis Beer-cooler	Nov. 6, 1877	225	67	12	791
195,859	Voith, Friedrich, Heidenheim, Germany. Frame and brass for calender-rolls	Oct. 2, 1877	168	47	12	585
198,561	Volkman, Fredreeh W., San Francisco, Cal. Stench-trap	Dec. 25, 1877	832	252	12	1090
	Volkmann, Martin H. (*See* Assmann, Albert, assignor.)					
189,287	Volle, Johann F., Houston, Tex. Mosquito-net frame	Apr. 3, 1877	259	86	11	592
	Vollmar, Philip. (*See* Naylor & Vollmar.)					
196,505	Vollrath, Gustav A. H., Altona, Germany. Bearing for shaft-hangers	Oct. 23, 1877	864	249	12	705
186,908	Vollum, Samuel S., San Francisco, Cal. Car-starter	Jan. 30, 1877	1103	342	11	191
198,553	Von Auer, William, Flatbush, assignor of one-half interest to W. H. Mott, Brooklyn, N. Y. Door-check	Dec. 25, 1877	876	267	12	1097
	Von Debsen, Henry. (*See* Bruns, Laig & Von Debsen.)					
188,993	Von Gerichten, Michael, New York, N. Y. Safety attachment for pockets	Mar. 27, 1877	1046	322	11	546
	Von Hoven, Louis. (*See* Stewart & Von Hoven.)					
190,103	Von Nieda, Jos. S., Philadelphia, Pa. Beer-forcing apparatus	Apr. 24, 1877	1146	349	11	732
188,760	Von Otter, Charles G., Stockholm, Sweden. Light-house signaling apparatus	Mar. 20, 1877	741	227	11	496
	Von Phul, Frank. (*See* Mallen, James, assignor.)					
	Von Rosenberg-Lipinsky, John C. F. (*See* Frederick, John C., assignor.)					
197,955	Von Sydow, Wilhelm, Barfelde, Prussia. Mixing and mashing machine	Dec. 11, 1877	256	79	12	991
188,992	Von Tiedemann, Frederick H. W., San Francisco, Cal. Cigar-holder	Mar. 27, 1877	1045	321	11	546
189,531	Voorhees, Ellison H., Pella, Iowa. Stove-caster frame	Apr. 10, 1877	517	163	11	634
186,699	Vornbrock, Frederick, Boston, Mass. Advertising-desk	Jan. 30, 1877	901	279	11	164
189,818	Vorrath, Gustav, Hoboken, N. J. Chamber-case	Apr. 17, 1877	820	253	11	681
194,629	Vorse, Addison S., Des Moines, Iowa. Artificial stone	Aug. 28, 1877	866		12	374
192,956	Verster, Edward, New Orleans, La. Packing bottles, &c., in cases	July 10, 1877	419	125	12	78
	Vorwald, John. (*See* Fox & Vorwald.)					
	Vorwald, Lewis. (*See* Fox & Vorwald.)					
189,530	Vosburgh, George W., and H. Van Slyck, Waterloo, Wis. Stove-drum	Apr. 10, 1877	516	162	11	634
187,203	Vose, George L., and A. S. Southwick, Providence, R. I. Button	Feb. 6, 1877	264	86	11	238
196,506	Vose, John, Boston, Mass. Foot-rest for chairs	Oct. 23, 1877	865	249	12	706
198,168	Vose, Samuel D., and J. D. Pierce, Milwaukee, Wis. Stove-pipe thimble	Dec. 11, 1877	466	146	12	1022
186,444	Vose, William T., Newtonville, Mass. Fire-shield	Jan. 23, 1877	658	202	11	122
186,029	Vosmus, Jeffroy, Brockton, Mass. Boot and shoe	Jan. 9, 1877	219	66	11	46
	Voss, A. (*See* Tarr, Charles M., assignor.)					
196,609	Voss, Detlef C., assignor to self and E. A. F. Wachter, New York, N. Y. Watch-case spring	Oct. 30, 1877	976	284	12	734
7,511	Votti, Carl, Newark, N. J., assignor to B. B. Schneider, New York, N. Y. Shade-holder for lamps (Reissue)	Feb. 13, 1877	545	166	11	286
197,751	Vrooman, Nelson, Johnstown, N. Y. Glove wrist-clasp	Dec. 4, 1877	46	14	12	952
	Vowles, D. W. (*See* Ketchum, William G., assignor.)					
	Vulcanite Jewelry Company. (*See* Mullee, William, assignor).....(Reissue.)					
	Wachter, E. A. F. (*See* Voss, Detlef C., assignor.)					
191,086	Waddell, Ephraim E., Gallipolis, Ohio. Cattle-stall	May 22, 1877	1010	301	11	902
191,388	Waddell, John, Elora, Ontario, Canada. Brush	May 29, 1877	1301	394	11	950
189,977	Wade, George W., Clam Lake, Mich. Steam road-wagon	Apr. 24, 1877	1601	306	11	713
185,845	Wade, John., Beaver Dam, Wis. Thill-coupling	Jan. 2, 1877	31	10	11	12
189,532	Wade, Josiah, Halifax, England. Printing-press	Apr. 10, 1877	518	163, 164	11	634
190,697	Wade, Nicholas K., assignor to H. R. Smith, Columbus, Ohio. Black-washing device	May 15, 1877	622	185	11	845
	Wade, William H., *et al.* (*See* Heckman, Louis, assignor.)					
192,721	Wademan, William J., Bay City, Mich. Bung-extractor	July 3, 1877	165	47	12	35
	Wadleigh, Le Roi B. (*See* Wiggin, John L., assignor.)					
	Wadlington, John M. (*See* Slaton & Wadlington.)					
194,486	Wadsworth, Henry, Duxbury, Mass. Plotting instrument	Aug. 21, 1877	730	217	12	345
	Wadsworth, Henry C. (*See* Forehand & Wadsworth.)					
196,319	Wadsworth, William W., New York, N. Y. Floor-protector	Oct. 23, 1877	678	195	12	680
197,233	Same..... Stove-platform	Nov. 20, 1877	539	159	12	854
189,404	Wafer, John, Etna, N. Y. Seed-planter	Apr. 10, 1877	399	127	11	619
	Wager, John L. (*See* Scudder & Wager.)					
	Same.....(*See* Wakeman & Wager.)					
187,070	Wager, John L., Deposit, N. Y. Horse hay-rake	Feb. 6, 1877	144	48	11	222
	Wagner, Anna G. (*See* Wagner, Anshert H., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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197,985	Wagner, Ausbert H., assignor to A. G. Wagner, Chicago, Ill. Grinding-mill	Dec. 11, 1877	285	87, 88	12	995
197,234	Wagner, Frederick E., Buffalo, N. Y. Reversible curtain-fixture	Nov. 20, 1877	540	100	12	854
	Wagner, Jeremiah. (*See* Gamble & Wagner.)					
197,188	Wagner, John P., assignor to J. Herig & Sons, Cleveland, Ohio. Fire-kindler	Nov. 13, 1877	475	140	12	837
7,512	Wagoner, Elijah, Westminster, Md. Straw-cutter (Reissue)	Feb. 13, 1877	545	106	11	286
189,156	Wagoner, Harrison, Coshocton, Ohio. Corn-planter	Apr. 3, 1877	125	45	11	576
195,189	Wagoner, Harrison and J., and F. Horn, Coshocton, Ohio. Combined land-roller and harrow	Sept. 11, 1877	449	134	12	471
	Wagoner, John. (*See* Wagoner & Horn.)					
196,728	Wagoner, Reuben, jr., assignor of one-third interest to L. W. Mills, Newton, Iowa. Attachment for corn-planters	Oct. 30, 1877	1092	317	12	750
189,157	Wagor, Philo R., Rockport, Mo. Arm-rest	Apr. 3, 1877	126	45	11	576
193,579	Wahner, John, Ellsworth, Wis. Corn-stalk-cutting implement	July 24, 1877	1063	318	12	179
186,774	Wainwright, Jacob T., Philadelphia, Pa. Circulating device in steam-boilers	Jan. 30, 1877	971	301	11	174
	Wait, Justin B. (*See* Scofield, Levi, assignor.)					
195,050	Wait, Oscar E., Lynn, assignor to Lawrence Spool Company, Boston, Mass. Bobbin	Sept. 11, 1877	316	95	12	451
195,060	Wait, Oscar E., Lynn, assignor to J. Woodbury; said Woodbury assignor to Lawrence Spool Company, Boston, Mass. Bobbin	Sept. 11, 1877	317	96	12	451
	Waite, L. R. (*See* Somes, J. Kirk, assignor.)					
	Same (*See* Somes, John K, assignor.)					
188,994	Waitt, George L., assignor to S. L. Garrett, Philadelphia, Pa. Car-door	Mar. 27, 1877	1047	322	11	546
194,487	Same Sash-holder	Aug. 21, 1877	731	218	12	345
195,547	Wakefield, John E., assignor to E. W. Vaill, Worcester, Mass. Folding-chair	Sept. 25, 1877	817	242	12	540
195,548	Same same	Sept. 25, 1877	818	243	12	540
195,549	Same same	Sept. 25, 1877	819	243	12	540
195,314	Wakefield, William O., Boston, Mass. Hydraulic engine	Sept. 18, 1877	587	172	12	498
	Wakeman, Frank E. (*See* Marvin, Harvey S., assignor.)					
188,445	Wakeman, Harwood, New York, N. Y. Reversible seat and back for chairs, lounges, and car-seats	Mar. 13, 1877	491	152	11	452
188,446	Wakeman, Harwood, New York, N. Y. Flexible tubing	Mar. 13, 1877	491	152	11	453
188,554	Same Armor for flexible tubing	Mar. 20, 1877	599	185	11	476
192,203	Same Seat and back for chairs	June 19, 1877	707	217	11	1087
194,389	Same Chair	Aug. 21, 1877	626	189	12	332
198,169	Same Pencil-sharpener	Dec. 11, 1877	466	146	12	1022
186,069	Wakeman, Joseph B., and J. L. Wager, Deposit, N. Y. Horse hay-rake	Jan. 9, 1877	259	78	11	51
193,431	Walbridge, Henry B., Brooklyn, N. Y. Fire-escape ladder	July 24, 1877	915	278	12	160
197,752	Same Stone pavement	Dec. 4, 1877	46	15	12	952
	Walcott, William W. (*See* Hollingsworth & Walcott.)					
193,789	Walden, James J., Locust Summit, Pa. Nut-lock	July 31, 1877	1293	388	12	222
7,661	Waldo, George H., Prattsburg, N. Y. Washing-machine (Reissue)	Nov. 20, 1877	764	227	12	888
187,994	Same same	Mar. 6, 1877	39	10	11	385
	Waldrow, James W. (*See* Clair, John B., assignor.)					
188,320	Waldron, John, assignor of one-half interest to J. J. Janeway, New Brunswick, N. J. Making printing-rolls	Mar. 13, 1877	364	114	11	435
190,528	Waldschmitt, Franz, New York, N. Y. Toy cigar-case	May 8, 1877	429	126	11	810
	Wales, Nathaniel, *et al.* (*See* Miller, William, assignor.)					
194,062	Wales, Sigourney, New York, assignor of one-half interest to N. H. Furness, Tarrytown, N. Y. Shirred fabric	Aug. 14, 1877	282	84	12	279
192,957	Walgrain, William C. F., and K. Buscall, New York, N. Y. School-desk	July 10, 1877	419	126	12	78
187,332	Walgrave, George W., New York, N. Y. Drawer	Feb. 13, 1877	418	131	11	271
195,678	Walk, Martha M., Philadelphia, Pa. Sleeve and cuff retainer	Sept. 25, 1877	943	282	12	557
194,488	Walker, Benjamin L., Sing Sing, N. Y. Pipe and nut wrench, with cutter	Aug. 21, 1877	732	218	12	346
	Walker, Cyrenus. (*See* Jones & Walker.)					
	Walker, David N. (*See* Snyder, John H., assignor.)					
192,100	Walker, Edward K., Exeter, N. H., and T. Roddick, Stanraer, Scotland. Sprinkler	June 19, 1877	603	184	11	1073
191,735	Walker, Edward W., Gosben, Ind. Wheelbarrow	June 5, 1877	210	66	11	1005
193,626	Walker, Ferdinand A., Sparta, Wis. Eave-trough	July 31, 1877	1129	338	12	200
190,936	Walker, George A., Retford, England. Grain-binder	May 15, 1877	846	251	11	872
190,171	Walker, George S., Erie, Pa. Clothes-drier	May 1, 1877	63	17	11	754
191,905	Walker, George W., Guy's Mills, Pa. Vapor-bath	June 12, 1877	383	119	11	1032
195,191	Walker, George W., Malden, Mass. Cooking-stove	Sept. 11, 1877	451	134	12	472
194,746	Walker, Henry, Hannibal, Mo. Piston-packing	Aug. 28, 1877	982	291	12	389
195,190	Walker, Hugh W., and T. L. Patterson, Greenock, Scotland. Clarifying saccharine juices	Sept. 11, 1877	450		12	472
193,788	Walker, James, Burgettstown, Pa. Preserving apples	July 31, 1877	1292		12	222
191,206	Walker, James C., Detroit, Mich. Window-screen	May 22, 1877	1127	337	11	918
197,697	Walker, James T., Albany, N. Y. Machine for impressing, embossing, compressing, and shaping metals, &c	Nov. 27, 1877	1032	309	12	933
197,698	Same Horseshoe-machine	Nov. 27, 1877	1033	310	12	934
197,956	Walker, Jonathan, assignor of one-half interest to C. Culver, Norton, Mich. Hoe	Dec. 11, 1877	257	79	12	991
186,909	Walker, Joseph H., Worcester, Mass. Press for molding soles of boots and shoes	Jan. 30, 1877	1109	343	11	191
193,737	Walker, Leander, Dallas, Tex. Traction-engine	July 31, 1877	1235	370	12	215
195,909	Walker, Lewis E., Bedford, Iowa. Trace-carrier	Oct. 9, 1877	228	65	12	601
188,701	Walker, Melvin H., Westborough, Mass. Plow-shoe	Mar. 20, 1877	742	228	11	496
192,397	Walker, Robert J., Philadelphia, Pa. Driving mechanism for drying-machines	June 26, 1877	940	282	11	1128
188,321	Walker, Samuel S., Crompton, R. I. Loom-picker	Mar. 13, 1877	365	114	11	435
191,272	Walker, Thomas, assignor to T. Walker, J. W. Bancroft, and S. H. Safford, Philadelphia, Pa. Amalgamator	May 29, 1877	1206	362	11	937
	Walker, Thompson. (*See* McNicholas, Thomas, assignor.)					
186,966	Walker, William, Trivoli, Ill. Feather-renovator	Feb. 6, 1877	52	18	11	208, 209
194,198	Walker, William, Bury, Great Britain, assignor of one-half interest to E. and A. Betts, Wilmington, Del. Reciprocating engine	Aug. 14, 1877	429	130	12	298
191,014	Walker, William B., Mankato, Minn. Trace-buckle	May 22, 1877	947	280	11	893
	Walker, William H. (*See* Washburn & Walker.)					
197,699	Walker, William H. H., assignor of one-half interest to N. E. True, Mercer, Me. Boot	Nov. 27, 1877	1034	310	12	934
187,333	Walker, William V., assignor to self and S. B. Young, Moravia, N. Y. Milk-cooler	Feb. 13, 1877	419	131	11	271
188,448	Walker, William W., Baltimore, Md. Washing-machine	Mar. 13, 1877	493	153	11	453
	Walker, Willis S. (*See* Cady, Almon B., assignor.)					
194,940	Walker, Wythe, Beaver, Utah. Candle-holder for miner's use	Sept. 4, 1877	186	57	12	426
194,941	Walkinshaw, Samuel L., assignor of one-half interest to J. H. Lindsey, Allegheny, Pa. Valve for steam-cylinders	Sept. 4, 1877	186	57	12	426
195,778	Wall, James W., Cleveland, Ohio. Oar	Oct. 2, 1877	81	25	12	573

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
195,677	Wall, John B, Carthage, Mo. Combined harrow, seed-planter, and roller	Sept. 25, 1877	942	281	12	557
197,431	Wall, John C., assignor of one-third interest to A. E. Miley, Washington, D. C. Sign	Nov. 20, 1877	736	220	12	884
	Wall, John E. (*See* Hughes & Wall.)					
	Wall, Stephen A., *et al.* (*See* Cleveland & McConnell, assignors.)					
	Wallace & Sons. (*See* Bryant, Edson L., assignor.)					
	Same. (*See* Wallace & Smith, assignors.)					
188,995	Wallace, Benjamin, New York, N. Y. Sink	Mar. 27, 1877	1047	332	11	546
	Wallace, Bridget, administratrix. (*See* Bailey, Thomas H.) (Reissue.)					
194,747	Wallace, Casper D., Auburn, N. Y. Drop-hammer	Aug. 28, 1877	984	292	12	390
187,683	Wallace, Charles I., Philadelphia, Pa. Portable drop-light	Feb. 20, 1877	763	237	11	323
187,204	Wallace, Ferrand G., Ripon, Wis. Mill-stone eye	Feb. 6, 1877	264	87	11	238
195,192	Wallace, Ferrand G., Jackson, assignor to self and J. Webster, Detroit, Mich. Flour-bolting machine	Sept. 11, 1877	452	135	12	472
	Wallace, George. (*See* Simons & Wallace.)					
	Wallace, Isabella. (*See* Stevens & Wallace.)					
191,736	Wallace, James G., assignor of one-half interest to E. M. Newton, Riceville, Tenn. Rotary-churn	June 5, 1877	210	66	11	1005
197,066	Wallace, John W., New York, N. Y. Thill-coupling	Nov. 13, 1877	347	103	12	818
	Wallace, Joshua G. (*See* Perkins, William J., assignor.)					
	Wallace, Julia M., *et al.* (*See* Chewning, John W., jr., assignor.)					
196,729	Wallace, Mary E., Newport, Ky. Button-hole sewing-machine	Oct. 30, 1877	1093	318	12	750
	Wallace, Oliver V. (*See* Wallace, Samuel R. and O. V.)					
	Wallace, Robert. (*See* White, Wallace & Moritz.)					
196,661	Wallace, Roger W., London, England. Compound for crucibles, retorts, and chemists' ware	Oct. 9, 1877	385		12	623
196,957	Same. Apparatus for purifying and condensing sulphuric acid	Nov. 6, 1877	226	67	12	792
186,387	Wallace, Samuel R. and O. V., San Francisco, Cal. Railway-car	Jan. 16, 1877	590	181	11	100
189,533	Wallace, William, Ansonia, Conn., and L. L. Smith, Passaic, N. J., assignors to Wallace & Sons, Ansonia, Conn. Process and apparatus for electro-plating wires	Apr. 10, 1877	520	164	11	635
198,436	Wallace, William, Ansonia, Conn. Electric light	Dec. 18, 1877	752	227	12	1070
196,402	Wallace, William V., Boston, Mass. Soap composition	Oct. 23, 1877	757		12	692
193,199	Wallach, Jacob, New York, N. Y. Overalls	July 17, 1877	657	201	12	118
193,467	Wallin, Charles E., Salt Lake City, Utah. Stirrup	July 24, 1877	949	288	12	466
189,670	Wallis, Theodore, Scipio, N. Y., assignor to self, S. Eddy, and C. Fiero. Chain-pump	Apr. 17, 1877	675	208	11	663
194,489	Wallis, Thomas M., assignor of one-half interest to W. Wurfflein, Philadelphia, Pa. Revolving fire-arm	Aug. 21, 1877	724	218	12	346
197,432	Wallis, Thomas M., assignor to W. Wurfflein, Philadelphia, Pa. Breech-loading gallery-rifle	Nov. 20, 1877	737	220	12	884
	Walmsley, James. (*See* Mallette & Walmsley.)					
7,907	Walpuski, Charles, Yonkers, assignor to J. Reckendorfer, New York, N. Y. Copying-pencil (Reissue)	Oct. 9, 1877	392	112	12	624
7,908	Same. same (Reissue)	Oct. 9, 1877	393	113	12	624
192,555	Same. same	July 26, 1877	1090	330	11	1149
	Walrath, Alphonso, *et al.* (*See* Lipe, Charles E., assignor.)					
196,276	Walsh, Francis A., assignor of one-half interest to F. A. Bowen, Chicago, Ill. Roller-seaming	Oct. 16, 1877	622	179	12	663
7,951	Walsh, James F., Hazel Green, Wis., assignor to G. Lauz. Cap for horse-collar. (Reissue)	Nov. 13, 1877	502	148	12	840
197,532	Walsh, James R., Saint Paul, Minn. Street-car draw-bar	Nov. 27, 1877	858	255	12	910
189,534	Walsh, John, Newton, Iowa. Saw-sharpener	Apr. 10, 1877	521	164	11	635
197,067	Walsh, Joseph, New York, N. Y. Instrument for cleaning telegraph-wires	Nov. 13, 1877	348	103	12	818
195,061	Walsh, Thomas J., San Francisco, Cal. Soldering-iron	Sept. 11, 1877	318	96	12	451
190,649	Walsh, Thomas H., Chicago, Ill. Garbage-sink	May 8, 1877	556	166	11	827
194,390	Walter, Adolf, Fremont, Ohio. Vehicle axle-box	Aug. 21, 1877	627	189	12	332
191,207	Walter, Amos, Middlebury, Ind. Harvester-cutter	May 22, 1877	1128	337	11	918
191,906	Walter, Harvey L., and R. Durrin, Manchester, Iowa. Photographic printing-frame	June 12, 1877	384	119	11	1032
197,505	Walter, John, assignor of one-half interest to F. D. Longacre, Zeiglersville, Pa. Provision-safe	Nov. 27, 1877	829	247	12	906
197,806	Walter, John, Zeiglersville, Pa. Fence	Dec. 4, 1877	100	30	12	960
187,788	Walter, John F., jr., Brooklyn, N. Y. Paint-mill	Feb. 27, 1877	890	277	11	319
197,433	Same. Putting up calcimining materials	Nov. 20, 1877	738	220	12	884
	Walter, Thomas C. (*See* Peter & Walter.)					
195,910	Walters, Charles F., Richmond, Ind. Bushing attachment to mill-spindles	Oct. 9, 1877	329	65	12	601
186,219	Walters, Ezekiel, Bowensburg, Ill. Grafting-machine	Jan. 16, 1877	410	126	11	78
	Walther, Alphons *et al.* (*See* Copeland, Robert A., assignor.)					
	Walton, Frederic H. (*See* Neddo & Walton.)					
198,325	Walton, Jeremiah E, Wilton, Conn. Thill-coupling	Dec. 18, 1877	642	196	12	1054
	Walton, John E. (*See* Cole, Thomas Z., assignor.)					
195,424	Walton, John H., Germantown, Ky. Grain and grass-seed harvester	Sept. 18, 1877	690	204	12	513
188,447	Walton, Thomas, Wheeling, W. Va. Facing for walls of houses	Mar. 13, 1877	492	153	11	453
	Walton, W. (*See* Silvester, William, assignor.)					
188,268	Walworth, Caleb C., Boston, Mass. Steam heating radiator	Mar. 13, 1877	310	98	11	428
	Wampole, Henry K. (*See* Wright, William A., assignor.)					
7,998	Wands, John C., Nashville, Tenn. Car-roof (Reissue)	Dec. 18, 1877	763	240	12	1072
7,999	Same. same (Reissue)	Dec. 18, 1877	764	231	12	1072
189,288	Wanner, Martin, and J. Yonkers, Karns City, Pa. Anchor and hydraulic support for well-tubing	Apr. 3, 1877	260	86	11	592
	Wanzer Richard M. (*See* Chamberlain, James F., assignor.)					
	Same. (*See* McCune, Joseph B, assignor.)					
188,703	Warburg, Bernard H., Cincinnati, Ohio. Burning stone-coal slack in the manufacture of brick, &c	Mar. 20, 1877	745	228, 229	11	496
197,912	Warburton, Howgate G., Leicester, Great Britain. Machine for winding yarn, &c	Dec. 4, 1877	206	62	12	975
194,317	Ward, Charles D., Jersey City, N. J. Tape-measure	Aug. 21, 1877	562	169	12	323
198,715	Ward, Daniel, New York, N. Y. Shutter-fastener	Dec. 25, 1877	1034	314	12	1120
186,642	Ward, David, Binghamton, N. Y. Electric motors	Jan. 23, 1877	839	259, 260	11	146
185,846	Ward, Dennis, Chicago, Ill. Process and apparatus for treating and rendering tank-gases	Jan. 2, 1877	31	10	11	13
196,275	Ward, Edward G, Jersey City, N. J. Dentifrice	Oct. 16, 1877	622		12	663
191,389	Ward, Frederick T., and T. Bedworth, Mohawk, N. Y. Spirit-level	May 29, 1877	1302	394	11	951
	Ward, George L (*See* Smyth, David M., assignor.)					
	Ward, George L., *et al.* (*See* Smyth, James C., assignor.)					
	Ward, Hezekiah F. (*See* Crandell & Ward.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec	Dr'gs	Vol.	Page.
195,860	Ward, John B., San Francisco, Cal. Aerial-machine	Oct. 2, 1877	170	48	12	585
198,060	Same.....Combined railway and conduit	Dec. 11, 1877	354	110	12	1007
197,106	Ward, John C., Albany, N. Y. Hernia-truss	Nov. 27, 1877	830	248	12	906
194,504	Ward, Moses N., assignor of one-half interest to D. J. Buckley, Cedar Rapids, Iowa. Cultivator, weeder, and marker	Aug. 21, 1877	746	222	12	347
197,702	Same.....Sash-fastener	Nov. 27, 1877	1041	312	12	934
191,626	Ward, Robert F., Senatobia, Miss. Fence	June 5, 1877	108	33	11	991
191,627	Same.....same	June 5, 1877	108	33	11	991
193,303	Ward, Seth, Princeton, Ind. Buckle	July 17, 1877	776	238	12	133
193,059	Ward, William C., assignor of one-half interest to F. A. Kennel and E. Long, Middletown, Ohio. Cultivator	July 10, 1877	516	156	12	90
195,550	Ward, William M., Eureka, Ill. Bed-bottom	Sept. 25, 1877	819	243	12	540
194,018	Wardwell, Charles P. S., Lake Village, N. H. Corn-shelling machine	Aug. 7, 1877	221	65, 66	12	264
198,170	Wardwell, Simon W., jr., assignor of one-half interest to G. W. Shaw and H. Menown, Saint Louis, Mo. Sewing-machine table	Dec. 11, 1877	467	146	12	1022
	Ware, Charles H., *et al.* (*See* Clingman, John, assignor.)					
190,797	Ware, Elijah, Omaha, Nebr. Pantograph	May 15, 1877	714	211	11	855
195,315	Same.....same	Sept. 18, 1877	588	172	12	498
187,944	Ware, John A., Morris, Ill. Folding chair	Feb. 27, 1877	1042	321	11	369
194,490	Waring, Arthur B., Yonkers, N. Y. Hat and cap	Aug. 21, 1877	735	218	12	346
	Warner, Arthur C., *et al.* (*See* Winchell, James F., assignor.)					
192,886	Warner, Charles H., Sturbridge, Mass. Stopping mechanism for sewing-machines	July 10, 1877	354	104	12	68
190,456	Warner, Ernest P., Chicago, Ill. Printing-telegraph	May 8, 1877	360	104, 105	11	801
	Warner, F. W., *et al.* (*See* Blackinton, Jesse, assignor.)					
196,172	Warner, Henry K. and Z., Lake City, Minn. Fire-escape	Oct. 16, 1877	511	149	12	649
189,405	Warner, Ira D., Bridgeport, Conn. Corset	Apr. 10, 1877	400	127	11	619
193,200	Warner, Ira D., Bridgeport, Conn., and L. C. Warner, New York, N. Y. Corset	July 17, 1877	657	201	12	118
197,913	Warner, Ira D., New York, N. Y. Corset	Dec. 4, 1877	207	63	12	975
8,010	Warner, James, Philadelphia, Pa. Support for upright standards.....(Reissue)	Dec. 25, 1877	1063	323	12	1124
	Warner, John E. (*See* Lathrop & Allen, assignors.)					
	Same....(*See* Allen & Lathrop, assignors.)					
197,434	Warner, John P., Baltimore, Md., assignor of three-fourths interest to T. G. Stewart, I. Mitchell, and E. Raine, jr. Gas-regulator	Nov. 20, 1877	739	221	12	884
	Warner, Joseph B. (*See* White & Lewin, assignors.)					
197,701	Warner, Joseph W., Luverne, Minn. Clothes-drier	Nov. 27, 1877	1040	312	12	934
186,282	Warner, Louis E., Buffalo, N. Y. Sample garment	Jan. 16, 1877	462	142	11	85
	Warner, Lucien C. (*See* Warner, Ira D. and L. C.)					
7,782	Warner, Lucien C., New York, N. Y. Corset.....(Reissue)	July 3, 1877	272	79	12	48
186,775	Same.....Suspender	Jan. 30, 1877	972	302	11	174
191,743	Warner, Robert D., assignor to C. C. Bradley, Syracuse, N. Y. Harvester-rake	June 5, 1877	216	68	11	1006
186,388	Warner, Warren E., Syracuse, N. Y. Door-hanger	Jan. 16, 1877	591	181	11	100
196,171	Warner, Wyllys H., Brooklyn, N. Y. Grate for furnaces, stoves, &c	Oct. 16, 1877	510	149	12	648
	Warner, Zimri. (*See* Warner, Henry K. and Z.)					
	Warren & Co., S. D. (*See* Cloudman, Frank A., assignor.)					
187,205	Warren, Albert, Jefferson, Ohio. Quilting-frame	Feb. 6, 1877	266	87	11	238
189,406	Same.....Die for cutting leather	Apr. 10, 1877	401	127	11	619
	Warren, Alfred D. (*See* Boyden & Warren.)					
186,776	Warren, Charles T., Atlanta, Ga. Automatic wagon-brake	Jan. 30, 1877	972	302	11	174
191,208	Warren, Cyrus M., Brookline, Mass. Roofing material	May 22, 1877	1129		11	919
195,062	Warren, Ebenezer B., and J. C. Nippes, Philadelphia, Pa. Vessel for molding pitch	Sept. 11, 1877	318	96	12	451
195,063	Same.....same	Sept. 11, 1877	319	96	12	452
189,407	Warren, Francis M., Portland, Oreg. Steam-tank for cooking fish and meat in cans	Apr. 10, 1877	402	127	11	619
192,037	Warren, Frederic P., Southsea, and A. Field, Adelphia, Great Britain, assignors to said Field. Composition sheathing for vessels	June 12, 1877	522	161	11	1050
194,748	Warren, George W., Bristol, Ind. Side-spar vehicle	Aug. 28, 1877	985	292	12	390
	Warren, Horace M., *et al.* (*See* Morse, Edward P., assignor.)					
189,671	Warren, John S., Cumberland Mills, Westbrook, Me. Paper-pulp engine	Apr. 17, 1877	675	209	11	663
	Warren, Samuel E. (*See* Fisher & Warren.)					
	Warren, W. L., *et al.* (*See* Laird, William A., assignor.)					
190,938	Warrick, Samuel, and G. S. Brush, Montreal, Canada. Steam engine	May 15, 1877	850	252	11	873
197,189	Warrington, Thomas A., and C. Harwood, London, England; said Harwood assignor to said Warrington. Machine for cutting cork	Nov. 13, 1877	476	140, 141	12	807
186,643	Warth, Albin, Stapleton, N. Y. Cloth-cutting machine	Jan. 23, 1877	839	260	11	146
188,702	Same.....Machine for cutting textile and other material	Mar. 20, 1877	743	228	11	496
192,548	Same.....Fire-escape	June 26, 1877	1084	327	11	1147
190,937	Warwick, John, Medo, Minn., and W. S. Marshall, Batavia, Ill. Windmill	May 15, 1877	849	251, 252	11	872
	Washburn & Moen Manufacturing Company. (*See* Bennett, Edward P., assignor.)					
	Same.....(*See* France, Gustus S., assignor.)					
	Washburn & Moen Manufacturing Company, *et al.* (*See* Gliddeu & Vaughn, assignors).....(Reissue.)					
	Washburn & Moen Manufacturing Company. (*See* Maury, Mathew F., assignor.)					
	Same.....(*See* Morgan & Landers, assignors.)					
186,389	Washburn, Charles F., Worcester, Mass. Barbed fence	Jan. 16, 1877	592	181	11	100
	Washburn, H. L., jr. (*See* Schindler & Gerdom).....(Reissue.)					
188,221	Washburn, Lettice R., and W. H. Walker, New Bedford, Mass. Cutter-head	Mar. 6, 1877	257	80	11	414
191,292	Washburn, Nathan, Hartford, Conn. Carr-wheel	May 29, 1877	1226	368	11	940
191,293	Same.....Car wheel and axle	May 29, 1877	1227	368	11	940
197,304	Same.....Car-wheel	Nov. 20, 1877	607	179	12	864
197,753	Same.....Mold for casting wheel-tires	Dec. 4, 1877	48	15	12	952
	Washburne, Amelia. (*See* Townsend & Washburne.)					
196,507	Washington, Orlando V., Burdett, Mo. Churn	Oct. 23, 1877	866	250	12	706
192,549	Wasmer, Jacob, assignor to W. Brown, Saint Louis, Mo. Well-bucket ear	June 26, 1877	1085	328	11	1148
	Waterbury Clock Company. (*See* Lewis, William F., assignor.)					
197,703	Waterbury, Daniel, and F. Miller, Kalamazoo, Mich. Harrow-teeth	Nov. 27, 1877	1042	312	12	934
191,907	Waterbury, James E., Rensselaerville, N. Y. Loom-temple	June 12, 1877	385	119	11	1032
	Waterbury Manufacturing Company. (*See* Croft, Edward, assignor.)					
186,911	Waterbury, Milan, Mason City, Iowa. Portable heater	Jan. 30, 1877	1111	343	11	191
190,650	Same.....Lamp-extinguisher	May 8, 1877	557	166	11	827
187,945	Waterbury, Nathaniel, Baltimore, Md. Butter-box	Feb. 27, 1877	1043	321	11	369
192,038	Same.....Spool-case	June 12, 1877	524	161	11	1050

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No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
197,914	Waterbury, Nathaniel, Baltimore, Md. Scoop	Dec. 4, 1877	208	63	12	975
195,468	Waterhouse, Gilbert A., Quincy, Mass. Easy-chair	Sept. 25, 1877	746	220	12	529
	Waterman & Mayer. (*See* Mayer, Joseph, assignor.)					
	Waterman, Henry. (*See* Evans, George F., assignor.)	(Reissue)				
185,880	Waterman, Jonathan W., Rutland, Wis. Die for the manufacture of thrashing-machine teeth	Jan. 2, 1877	64	20	11	17
	Waters & Co., Charles H. (*See* Miller, Alfred, assignor)	(Reissue.)				
187,740	Waters, Elisha, Troy, N. Y. Water-tight joint for roofs, &c	Feb. 27, 1877	842	262	11	342
193,387	Same. Making paper cans for petrolum and other fluids	July 24, 1877	875	267	12	151
186,644	Waters, Jabez M., Cincinnati, Ohio. Paneled chair-seat	Jan. 23, 1877	842	260	11	147
	Waters, Jones. (*See* Bourgard, Charles, assignor.)					
198,326	Waters, Michael, New York, N. Y. Car-replacer	Dec. 18, 1877	643	196	12	1054
	Waters, Richard T. (*See* Johannes, Ira H., assignor.)					
196,508	Waters, William E., Orange, N. J. Calendar	Oct. 23, 1877	866	250	12	705
191,273	Waters, Zera, Bloomington, Ill. Pavement	May 29, 1877	1207	362	11	937
	Watkins, Albert H. (*See* Fischer, Lewis, assignor)	(Reissue.)				
188,322	Watkins, Albert H., Boston, Mass. Vapor-burner	Mar. 13, 1877	365	114	11	435
185,991	Watkins, Arthur, assignor to self and T. G. Ainscough, Pittsburg, Pa. Metal-punching machine	Jan. 2, 1877	175	54	11	32
	Watkins, Charles T., *et al.* (*See* Hurd, Ira N., assignor.)					
	Watkins, John C. (*See* Macy & Watkins.)					
194,855	Watkins, John E., and M. Sale, Smithfield, Ky. Cotton-harvester	Sept. 4, 1877	99	32	12	414
189,819	Watkins, William J., assignor of one-half interest to J. Hughes, Mahanoy City, Pa. Boot and shoe	Apr. 17, 1877	821	253	11	681
192,722	Watkins, William M., Worcester, Mass. Staple, scuttle, and trap	July 3, 1877	166	47	12	36
195,316	Wathinson, George, assignor to L. Candee & Co., New Haven, Conn. Overshoe	Sept. 18, 1877	589	173	12	499
192,102	Watriss, A. Whiting, Cambridge, Mass. Paper folder and cutter	June 19, 1877	604	184	11	1073
198,171	Watrous, James S., Ridgefield, Ill. Raising cream	Dec. 11, 1877	468	147	12	1022
186,777	Watrous, Joseph, Groton, Conn. Combined pencil-sharpener and point-protector	Jan. 30, 1877	973	302	11	174
189,408	Watson, Abram P., and C. E. Crane, Lake City, Minn. Adjustable safety-sole for boots and shoes	Apr. 10, 1877	402	128	11	619
188,085	Watson, Augustus, Altona, Mo. Bed-slat	Mar. 6, 1877	120	36	11	396
193,358	Same. Flood-gate and fence	July 24, 1877	848	260	12	151
189,158	Watson, Benjamin D., assignor to self and J. C. Watson, Durant, Miss. Animal-poke	Apr. 3, 1877	127	45	11	576
	Watson, C. H. (*See* Moffitt, Alexander, assignor.)					
194,749	Watson, Cornelius, assignor to self and J. G. Gunn, Yanceyville, N. C. Rotary harrow	Aug. 28, 1877	985	292	12	390
186,615	Watson, David, Havana, Cuba. Evaporating apparatus	Jan. 23, 1877	843	261	11	147
186,646	Same. Open-pan juice-evaporator	Jan. 23, 1877	844	261	11	147
	Watson, David W. (*See* Dummer, Edward, assignor.)					
197,704	Watson, Edward J., Bridgeport, Conn. Animal-shearing apparatus	Nov. 27, 1877	1043	313	12	935
	Watson, Edward P. (*See* Perry & Watson.)					
	Watson, Eldridge H. (*See* Milks & Watson.)					
187,241	Watson, George, Oakland, Cal. Earth-auger	Feb. 13, 1877	323	104	11	258
186,390	Watson, Henry F., Philadelphia, Pa. Fire-place	Jan. 16, 1877	593	181	11	100
192,103	Watson, Henry W., New York, N. Y. Filter	June 19, 1877	605	184	11	1074
192,313	Same. Self-cleaning filter	June 19, 1877	835	253	11	1103
	Watson, James. (*See* Herman, Hervoy, assignor.)					
	Watson, James C. (*See* Watson, Benjamin D., assignor.)					
187,435	Watson, James G., Springfield, Ill. Windmill	Feb. 13, 1877	518	160	11	284
185,879	Watson, Jeremiah M., Sharon, Mass. Machinery for making shank-pieces for boots and shoes	Jan. 2, 1877	63	20	11	17
198,525	Same. Machine for making boot and shoe shanks	Dec. 25, 1877	853	259, 260	12	1093
190,798	Watson, Nehemiah, Arcadia, R. I. Pipe-cutting machine	May 15, 1877	714	212	11	855
	Watson, Samuel. (*See* Ogborn, Harrison, assignor.)					
195,779	Watson, Samuel S., and J. J. Scott, San Francisco, Cal. Dish-washing apparatus	Oct. 2, 1877	82	25	12	573
	Watson, Thomas F. (*See* Hawkes & Watson.)					
198,437	Watson, William C., Paterson, N. J. Book-clamp	Dec. 18, 1877	753	228	12	1071
	Watson, William J. (*See* Miller & Susemihl, assignors.)					
191,209	Watson, William M., Tonica, Ill. Metallurgic furnace	May 22, 1877	1130	338	11	919
192,101	Same. Railway-joint	June 19, 1877	603	184	11	1073
186,910	Watson, William O., Albany, Ga. Cotton-gin	Jan. 30, 1877	1110	343	11	191
193,580	Same. Roll-box for cotton-gins	July 24, 1877	1061	319	12	180
198,252	Watters, John, and C. Schuessler, New York, N. Y. Wagon-curtain fastener	Dec. 18, 1877	584	177	12	1045
7,857	Wattles, Joseph W., Canton, Mass. Ring for ring and traveler spinning-machines. (Reissue)	Aug. 21, 1877	760	225	12	349
188,084	Same. Spinning-ring holder	Mar. 6, 1877	119	35	11	396
186,283	Watts, John H. C., Baltimore, Md. Dial-telegraph	Jan. 16, 1877	462	142	11	85
	Watts, Parker & Co. (*See* Lyman, Azel S., assignor.)					
192,204	Wayland, Eli, Salisbury, Mo. Gate	June 19, 1877	708	217	11	1087
	Wayne Agricultural Company. (*See* Trayser, Paul, assignor.)					
	Same. (*See* Fulghum, Jesse P., assignor.)					
	Wayne, Joseph W. (*See* Graham, Jesse A., assignor.)					
	Weart, G. W., *et al.* (*See* Stanton, John W., assignor.)					
197,435	Weatherhead, Davis L., assignor to self and T. E. Akins, Mount Holly, N. J. Feather-renovator	Nov. 20, 1877	740	221	12	885
191,737	Weathers, James, Greensburg, Ind. Lifting-jack	June 5, 1877	211	67	11	1005
192,472	Weaver, Daniel L., and G. Noble, Hunnewell, Ky. Hydraulic jack	June 26, 1877	1001	302	11	1137
	Weaver, George S. (*See* Weaver, William, assignor.)					
	Weaver, Harvey V. (*See* Weaver, Thomas C. and H. V.)					
197,190	Weaver, Henry M., Mansfield, Ohio. Pendulum-scales	Nov. 13, 1877	477	141	12	837
7,717	Weaver, James N., Waverly, N. Y. Spark-arrester	(Reissue) May 29, 1877	145, 146	437, 438	11	968
	Weaver, John. (*See* Nagle, Samuel L., assignor.)					
187,685	Weaver, Lloyd, assignor to Fowler Nail Company, Seymour, Conn. Horseshoe-nail	Feb. 20, 1877	764	237	11	324
193,468	Weaver, Thomas C. and H. V., Konney, Ill. Hog-trap	July 24, 1877	950	289	12	166
187,684	Weaver, William, assignor of one-half interest to G. S. Weaver, Havana, N. Y. Plow-handle tip	Feb. 20, 1877	763	237	11	323
189,159	Webb, Ezra, Brooklyn, assignor to S. E. Shutter, New York, N. Y. Provision-safe	Apr. 3, 1877	127	45	11	576
	Webb, James N. (*See* Hallas & Webb.)					
193,432	Webb, Josiah W., Oakland, Cal. Filtering and cooling apparatus	July 24, 1877	916	279	12	161
192,205	Webb, Prescott, Greenleaf, Minn. Ox-bow fastener	June 19, 1877	708	217	11	1087
186,912	Webb, Thomas M., assignor to L. S. Farrand, Norwalk, Ohio. Wash-board	Jan. 30, 1877	1111	344	11	191
	Webb, William. (*See* Murphy, John W., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
191,015	Webb, William A., Brooklyn, N. Y. Folding arm-chair	May 22, 1877	947	280	11	893
187,206	Webber, Charles C., Holyoke, assignor to Rice, Barton & Fales Machine and Iron Company, Worcester, Mass. Apparatus for transmission of power	Feb. 6, 1877	267	87	11	238
190,939	Webber, Ira J., Salem, Mass. Door-check	May 15, 1877	852	252	11	873
191,390	Webber, Levi, North Vassalborough, Me. Bearing and box for vertical shafts	May 29, 1877	1302	395	11	951
	Webbert, Henry. (*See* Vermilya, Leland D., assignor.)					
196,403	Weber, Aaron M., Chicago, Ill. Corset	Oct. 23, 1877	757	218	12	692
195,064	Weber, Gottlieb, New York, N. Y. Fruit-press	Sept. 11, 1877	320	97	12	452
192,356	Weber, Jacob, assignor of one-half interest to J. M. Stoker, Allegheny, Pa. Harrow	June 26, 1877	897	269	11	1123
198,061	Weber, Michael, Zurich, Switzerland. Spring air-gun	Dec. 11, 1877	355	110	12	1007
197,705	Weber, Philip, and H. Damme, Saint Louis, Mo. Axle-skein	Nov. 27, 1877	1043	313	12	935
186,284	Weber, Robert, New Ulm, Tex. Plow-stock	Jan. 16, 1877	463	143	11	86
190,940	Weber, Theodore A., New York, N. Y., assignor to R., W. S., and F. F. Runyan. Hermetically-closing jar-cover	May 15, 1877	353	252	11	873
194,491	Weber, Theodore A., assignor to P. L Strauss, New York, N. Y. Bottle-stopper	Aug. 21, 1877	735	219	12	346
190,651	Webster, George H., Boston, Mass. Coupling for lead pipes	May 8, 1877	558	166	11	827
	Webster, Harvey. (*See* Marshall, Joshua H., assignor.)					
	Webster, John. (*See* Wallace, Ferrand G., assignor.)					
187,334	Webster, John W., Freeville, N. Y. Fence	Feb. 13, 1877	420	131	11	271
191,786	Webster, Joseph D., deceased, by L. D. Webster, administrator, Chicago, Ill. Car-axle box	June 12, 1877	269	84	11	1018
	Webster, Lewis D., administrator. (*See* Webster, Joseph D.)					
196,277	Webster, Orville F., assignor of one-half interest to W. W. Nichols, Ann Arbor, Mich. Bridle	Oct. 16, 1877	624	180	12	664
	Webster, Towner K. (*See* Johnson, Erik, assignor.)					
187,436	Webster, William, Morrisania, N. Y. Feathering paddle-wheel	Feb. 13, 1877	519	160	11	284
187,071	Weckerlin, Dominick, Brooklyn, assignor to R. Hoe & Co., New York, N. Y. Inking-roller socket	Feb. 6, 1877	145	48	11	222
197,305	Weckerlin, Dominick, Brooklyn, N. Y. Feed-guide for printing-presses	Nov. 20, 1877	607	180	12	864
196,278	Weddel, John W., Freeport, Ill. Rein-holder and whip-socket	Oct. 16, 1877	624	180	12	664
195,425	Weddle, Thomas, Brooklyn, N. Y. Leg and foot rest	Sept. 18, 1877	691	204	12	513
194,630	Wedolin, Carl R., Göthcborg, Sweden. Measuring and registering device for ascertaining the quantity and quality of distilled liquids	Aug. 28, 1877	867	258, 259	12	374
187,686	Wedesweiler, Jacob, assignor of one-half interest to M. Schmitz, Chicago, Ill. Dice-box	Feb. 20, 1877	765	237	11	324
186,182	Weed, Clinton A., Racine, Wis. Mortising-machine	Jan. 9, 1877	365	112	11	65
187,953	Same.....Stay-rod for wagon-bolsters	Feb. 27, 1877	1052	324	11	370
190,990	Weed, Clinton A., assignor to J. I. Case & Co., Racine, Wis. Grain-separator	May 22, 1877	923	273	11	890
190,991	Same.....Grain and seed separator	May 22, 1877	923	273	11	890
191,497	Weed, Clinton A., Racine, Wis. Apparatus for raising and lowering the reels of grain-headers	May 29, 1877	1427	430	11	964
	Weed, Clinton B. (*See* Erskine & Weed.)					
188,704	Weed, Clinton H., and R. D. Bell, assignors to J. I. Case & Co., Racine, Wis. Harvester-reel	Mar. 20, 1877	745	229	11	496
193,388	Weed, Francis E., and R. Messinger, New Canaan, Conn. Device for clamping the bolts on fish-plates of railway-rails	July 24, 1877	876	268	12	155
198,476	Weed, James, Muscatine, Iowa. Cider-mill	Dec. 25, 1877	805	244	12	1087
193,582	Weed, Levi S., assignor to C. A. Baldwin, New Haven, Conn. Corset skirt-supporter	July 24, 1877	1065	319	12	180
188,323	Weed, Lonisa A., Brooklyn, N. Y. Ear-ring	Mar. 13, 1877	366	115	11	435
	Weed Sewing Machine Company. (*See* Price, John B., assignor.)					
	Weed, Smith M. (*See* Marshall, Nathaniel, assignor.)					
	Weeden, William N. (*See* Hallas & Weeden.)					
193,581	We den, William N., assignor to Benedict & Burnham Manufacturing Company, Waterbnry, Conn. Wick-raiser	July 24, 1877	1065	319	12	180
190,992	Weeks, James H., Lowell, Mich. Blacking-box	May 22, 1877	921	273	11	890
187,437	Weeks, John J., Locust Valley, N. Y. Seat for water-closets, &c	Feb. 13, 1877	520	161	11	284
7,829	Wegmann, Federigo, Naples, Italy. Machine for crushing meal.....(Reissue)	July 31, 1877	1315	394	12	226
186,913	Weidenmann, Jacob, New York, N. Y. Silt-basin	Jan. 30, 1877	1112	344	11	191
193,902	Weider, Jacob and J. S., Burlington, Iowa. Churn	Aug. 7, 1877	102	32	12	249
	Weider, John S. (*See* Weider, Jacob and J. S.)					
	Weidling, William H. (*See* Antes, Hery, assignor.)					
	Weidmann, Anton, *et al.* (*See* Egleff, Bathis, assignor.)					
194,199	Weigle, Charles H., York, Pa. Oiling journals of loose pulleys	Aug. 14, 1877	431	130	12	299
192,039	Weikert, Alvin W., Harrisburg, Pa. Car-bumper	June 12, 1877	525	161	11	1050
	Weil, Jacob. (*See* Loffler & Weil.)					
186,647	Weiland, Carl, Chicago, Ill. Artificial-stone compound	Jan. 23, 1877	845		11	147
	Weilbacher, Rudolph C. (*See* Brintnall & Weilbacher.)					
194,063	Weimer, Peter L., Lebanon, Pa. Tuyere	Aug. 14, 1877	283	84	12	279
	Weinberg, Louis, *et al.* (*See* Kundergraber, Charles, assignor.)					
188,705	Weinel, Josiah J., Allegheny Township, Pa. Miners' lamp	Mar. 20, 1877	746	229	11	496
192,550	Weinman, George M., Columbus, Ohio. Steam piston-valve	June 26, 1877	1085	328	11	1148
198,526	Same.....Cylinder-cock	Dec. 25, 1877	854	260	12	1094
	Weinreich, Wolf A. (*See* Cahill, Henry Y., assignor.)					
196,958	Weir, Daniel P., assignor to self and J. Jackson, Salem, Mass. Water-meter	Nov. 6, 1877	227	67	12	792
196,279	Weir, John, New York, N. Y. Feed-bag	Oct. 16, 1877	625	180	12	664
190,652	Weir, William S., Monmouth, Ill. Sulky-plow	May 8, 1877	560	166, 167	11	827
190,653	Same.....Clevis	May 8, 1877	561	167	11	828
192,608	Same.....Plow-clevis	July 3, 1877	53	15	12	19
	Weis, Joseph. (*See* Bevins, Weis & Phillips.)					
	Weisbach, C. H. (*See* Meissner, Romer & Anke, assignors.)					
7,975	Weiss, Albert R., Brooklyn, N. Y. Gas-torch.....(Reissue)	Nov. 27, 1877	1065	319	12	938
187,072	Same.....same	Feb. 6, 1877	146	48	11	222, 223
186,510	Weiss, Franz F., Jersey City Heights, N. J. Pocket-book lock	Jan. 23, 1877	712	219	11	129
187,207	Weiss, Thomas, Bethlehem, Pa. Rotary wardrobe	Feb. 6, 1877	267	87	11	239
188,213	Same..... Pipe-coupling	Mar. 6, 1877	249	78	11	413
194,492	Weizell, Henry, Maple Grove, Minn. Washing-machine	Aug. 21, 1877	736	219	12	346
187,954	Welch, John M., Buena Vista, Tex. Reciprocating churn	Feb. 27, 1877	1053	324	11	370
192,551	Welch, Joseph, Delphos, Ohio. Fire-escape	June 26, 1877	1087	329	11	1148
189,672	Weldon, Elizabeth S., New York, N. Y. Corset	Apr. 17, 1877	676	209	11	663
190,392	Weldon, Lawrence F., New York, N. Y. Crutch	May 1, 1877	278	82	11	782
	Welham, J. Thomas, administrator. (*See* Welham, Thomas.)					
190,172	Welham, Thomas, deceased, J. T. Welham, administrator and assignor to R. Burr, Philadelphia, Pa. Combining and operating a series of turbine water-wheels	May 1, 1877	63	17	11	754

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Drg.	Vol.	Page.
187,687	Welsch, Jonathan C., Edgerton, Ohio. Road-scraper	Feb. 20, 1877	767	238	11	324
	Welte, Emil, *et al.* (*See* Heuser, May, assignor.)					
185,992	Weller, Eugene D., Lima, N. Y. Running-gear for vehicles	Jan. 2, 1877	176	55	11	32
185,993	Same.....same	Jan. 2, 1877	178	55	11	32
188,324	Weller, Jacob J., Buffalo, N. Y. Folding-chair	Mar. 13, 1877	367	115	11	426
	Wellge, William. (*See* Butler & Wellge.)					
186,026	Wellhouse, George, and J. L. Taplin, Akron, Ohio. Reservoir cooking-stove	Jan. 9, 1877	216	66	11	46
190,104	Wellington, Henry, Brooklyn, N. Y. Vacuum-lamp	Apr. 24, 1877	1147	349	11	732
190,393	Same.....Gasoline cooking-stove	May 1, 1877	279	82	11	782
195,240	Same.....Vapor-burner	Sept. 18, 1877	517	151	12	488
195,551	Same.....Wall-lamp	Sept. 25, 1877	850	243	12	540
	Wells & Riggin. (*See* Peet, Charles M., assignor.)					
	Welsh, Anthony, *et al.* (*See* Koplin, William, assignor.)					
	Wells Balance Engine Company. (*See* Wells, Wallace, assignor.)					
189,160	Wells, Benjamin F., Brooklyn, N. Y. Wagon-seat spring	Apr. 3, 1877	128	46	11	576
194,200	Wells, Edward C., Vineland, N. J., assignor of one-half interest to H. Taylor, Towanda, Pa. Barrel-stand	Aug. 14, 1877	431	131	12	299
185,994	Wells, Frederick B., Montreal, Canada. Sewer-trap	Jan. 2, 1877	180	56	11	32
	Wells, Frederick C. (*See* Whitmore, Seth H., assignor.)					
189,161	Wells, George W., Black Hawk, Colo. Shank-sup ort for boots and shoes	Apr. 3, 1877	128	46	11	577
191,087	Wells, Harrison and H. L., assignors to H. L. Hopkins, Manchester, Iowa. Lifting-lever for harvesters, &c	May 22, 1877	1011	301	11	902
191,908	Wells, Harvey L, Burlington, Iowa. Sad-iron	June 12, 1877	385	120	11	1032
	Wells, H. Levanson. (*See* Wells, Harrison and H. L.)					
198,477	Wells, Isaac, assignor to self, J. F. Post, Wilmington, N. C., and D. D. Barber, Sumter County, S. C. Tanning leather	Dec. 25, 1877	806		12	1087
198,478	Same.....Extract for tanning leather	Dec. 25, 1877	807		12	1088
193,201	Wells, James B., Cincinnati, Ohio. Toy buzz	July 17, 1877	659	201	12	118
	Wells, James E. (*See* Amonett, Ammon A., assignor.)					
187,946	Wells, James E., New Milford, Conn. Sheet-metal spinning-machine	Feb. 27, 1877	1044	321	11	369
197,235	Wells, Levi W., Hopewell, Canada. Machine for tapping mains	Nov. 20, 1877	541	160	12	854
198,172	Wells, Nathaniel M., jr., Fillmore, assignor of one-half interest to J. S. Bishop, Hume, N. Y. Cheese-vat	Dec. 11, 1877	468	147	12	1022
195,317	Wells, Newton, Painesville, Ohio. Meat-block	Sept. 18, 1877	500	173	12	499
188,214	Wells, Parker, Lynn, Mass. Water-meter	Mar. 6, 1877	250	78	11	413
188,215	Same.....same	Mar. 6, 1877	251	78	11	413
	Wells, Richard. (*See* Clark & Wells.)					
193,304	Wells, Samuel J., Chicago, Ill. Hair-switch	July 17, 1877	777	238	12	133
	Wells, Thomas L. (*See* Yeargin & Wells.)					
	Wells, T. J. (*See* Bankston John H., assignor.)					
186,285	Wells, Wallace, Brooklyn, N. Y., assignor to Wells Balance Engine Company, Stamford, Conn. Locomotive engine	Jan. 16, 1877	464	143	11	86
187,242	Wells, Webster, Boston, Mass. Friction-heater for cars and buildings	Feb. 13, 1877	323	104	11	258
188,449	Wells, William, assignor of one-half interest to W. and W. R. Jones, Muskegon, Mich. Fruit-crate	Mar. 13, 1877	494	153	11	453
187,688	Wells, William, Salem, Mass. Car-axle	Feb. 20, 1877	766	238	11	324
	Wemple, Leonard C. (*See* Douglas & Wemple.)					
	Wendel, August. (*See* Hunt & Wendel.)					
190,799	Wendt, Frederick, Utica, N. Y. Safety-pocket	May 15, 1877	715	212	11	855
188,269	Wentworth, William P., Seneca Falls, N. Y. Lamp-lighter	Mar. 13, 1877	311	98	11	428
196,404	Wenzel, Hermann J., San Francisco, Cal. Transmitting time-movement to distant dials	Oct. 23, 1877	758	218	12	692
	Wenzel, Louis, *et al* (*See* Kast, Ernst, assignor.)					
193,627	Werden, Cyrus A., assignor to self and W. B. Werden, Waukegan, Ill. Grinding-machine	July 31, 1877	1129	339	12	200
	Werden, William B. (*See* Werden, Cyrus A., assignor.)					
195,734	Werner, August, New York, N. Y. Cork-fastening machine	Oct. 2, 1877	46	13	12	567
194,278	Werner, Christopher, deceased, by L. Werner, administratrix, Charleston, N. C. Awning-frame	Aug. 14, 1877	508	153	12	308
	Werner, Isabella, administratrix. (*See* Werner, Christopher.)					
186,070	Werner, John F., New York, N. Y. Fire-escape	Jan. 9, 1877	259	78	11	51
192,800	Wertenberger, Levi, and G. W. Amiss, said Amiss assignor to said Wertenberger, Laketon, Ind. Sulky-plow and cultivator	July 3, 1877	245	72	12	45
192,206	Wertheim, Joseph, Bornheim, Germany. Atmospheric gas-engine	June 19, 1877	709	218	11	1087
198,716	Wertman, William T., Winona, Minn. Harrow	Dec. 25, 1877	1034	314	12	1120
	Werts, George W. (*See* Werts & Gilmer, assignors.)					
190,993	Werts, Nicholas, and J. G. Gilmer, Concordia; said N. Werts, assignor of one-fourth interest to G. W. Werts, Beloit, Kans. Grain-binder	May 22, 1877	925	273 274	11	890
190,394	Wescott, Henry F., and R. O. Randall, assignors to Gadsden Grange Mill Company, Gadsden, Ala. Adjusting device for grinding-mills	May 1, 1877	281	82	11	784
198,173	Wertz, John S., Burlington, Iowa. Car-coupling	Dec. 11, 1877	469	147	12	1022
188,706	Wessell, Otto, A. Nickell, and R. Gross, New York, N. Y. Piano-action	Mar. 20, 1877	747	229	11	496
	Wesson, Daniel B. (*See* Smith, Dexter, assignor.)					
186,509	Wesson, Daniel B., Springfield, Mass. Revolving fire-arm	Jan. 23, 1877	711	219	11	129
187,689	Wesson, Daniel B., and J. H. Bullard, Springfield, Mass.; said Bullard assignor to said Wesson. Revolving fire-arm	Feb. 20, 1877	767	238	11	324
198,228	Same.....same	Dec. 18, 1877	546	169	12	1040
193,060	Wesson, Franklin, and C. N. Cutter, Worcester, Mass., assignors to said Wesson. Breech-loading fire-arm	July 10, 1877	516	156	12	91
195,552	Wesson, Walter D., assignor of one-half interest to A. B. Foster, Providence, R. I. Canceling-stamp	Sept. 25, 1877	821	244	12	540
194,391	West, A. St. Clair, Charleston, S. C. Wedge for tool-handles	Aug. 21, 1877	628	189	12	332
193,838	West, Aaron J., Conneautville, Pa. Steaming oil-wells	Aug. 7, 1877	41	13	12	240
195,679	West, Charles A., Richmond, Va. Car-heater	Sept. 25, 1877	944	282	12	558
189,672	West, John W., Boston, Mass. Thread-spooling machine	Apr. 17, 1877	677	200	11	663
194,631	West, Joseph D., East Orange, N. J., and W. H. Darby, Brooklyn, N. Y. Gas-burner	Aug. 28, 1877	868	259	12	374
194,750	West, Philip L., assignor of one-half interest to W. F. Cain, Lyndon, Kans. Washing-machine	Aug 28, 1877	986	292	12	390
189,289	West, Samuel A., assignor of one-half interest to P. Hinkle, San Francisco, Cal. Steam-engine governor	Apr. 3, 1877	261	85	11	593
186,048	West, Thomas J., assignor of one-half interest to C. Bano, Pleasantville, Iowa. Car-coupling	Jan. 9, 1877	240	72	11	49
194,279	Westbrook, Abraham D., Lambertville, N. J. Valve-cup for oil wells	Aug. 14, 1877	509	154	12	309
	Westbrook Britannia Company. (*See* Stevens, William W., assignor.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
188,761	Westcott, Charles S., Elizabeth, N. J., B. Adriance and T. Miner, Brooklyn, N. Y., assignors to said Adriance and Miner and P. W. Kellogg, Skaneateles, N. Y. Punch for numbering checks	Mar. 27, 1877	810	248	11	514
193,628	Westcott, Charles S., Elizabeth, N. J., assignor to American Type Machine Company (limited), New York, N. Y. Matrice for type-casting	July 31, 1877	1131	339	12	200
191,210	Westcott, Daniel L., Fort Wayne, Ind. Rotary churn	May 22, 1877	1131	338	11	919
187,438	Westcott, John H., Oneida, N. Y. Chuck	Feb. 13, 1877	521	161	11	284
198,717	Westerfield, Eugene T., New York, N. Y. Vehicle-spring	Dec. 25, 1877	1035	315	12	1120
191,391	Westermann, Francis, and O. Mursch, assignors to L. Höpken, San Francisco, Cal. Cube-sugar machine	May 29, 1877	1303	395	11	951
	Western Dynamo-Electric Machine Company. (*See* Weston & Quimby, assignors.)					
	Western Union Telegraph Company. (*See* Edison, Thomas A., assignor.)					
	Same.....(*See* Nicholson, Henry C., assignor.)					
191,211	Westinghouse, Jay, Schenectady, N. Y. Link for endless-chain horse-power	May 22, 1877	1132	339	11	919
196,959	Westinghouse, Levi, Saint Louis, Mo. Truss	Nov. 6, 1877	227	68	12	792
187,496	Westlake, William, Chicago, Ill. Window-washer and garden-sprinkler	Feb. 20, 1877	591	183	11	301
188,270	Same.....Lamp	Mar. 13, 1877	312	98, 99	11	428
188,271	Same.....Car-lamp	Mar. 13, 1777	313	99	11	428
188,707	Westley, James, assignor to self and J. Morris, Manchester, England. Injector for steam-boilers	Mar. 20, 1877	748	230	11	496
195,680	Weston, Charles F., Orleans, N. Y. Trunk	Sept. 25, 1877	945	282	12	558
	Weston, Charles H. (*See* Chase, William K., assignor.)					
196,405	Weston, Charles W., San Francisco, Cal. Berry-box	Oct. 23, 1877	758	219	12	692
189,820	Weston, Chauncey C., Laurel, Md. Incubator	Apr. 17, 1877	822	254	11	681
196,846	Weston, Edward, Newark, and E. E. Quimby, Orange, assignors to Western Dynamo-Electric Machine Company, Newark, N. J. Compound switch in dynamo-electric machines employed in the art of electroplating	Nov. 6, 1877	108	33	12	776
190,457	Weston, Thomas, Hingham, Mass. Sectional steam-boiler	May 8, 1877	362	105	11	801
194,019	Weston, Thomas A., assignor to Yale Lock Manufacturing Company, Stamford, Conn. Hoisting-tackle	Aug. 7, 1877	222	66	12	264
193,718	Same.....Traveling-crane	Dec. 25, 1877	1036	{315 316	{12	1120
186,697	Westphal, Charles H., Buffalo, N. Y. Sad-iron	Jan. 30, 1877	900	278	11	164
193,305	Westwood, William J., South Bend, assignor of part interest to T. Jernegan, trustee, Michigan City, Ind. Balanced slide-valve	July 17, 1877	777	238	12	133
198,527	Wethered, Edwin R., Woolwich, England. Pulley-block	Dec. 25, 1877	855	260	12	1094
195,318	Wethered, James S., New York, N. Y. Composition for paving-blocks	Sept. 18, 1877	590		12	499
198,719	Wetherill, Robert, Philadelphia, Pa. Lamp-burner	Dec. 25, 1877	1038	316	12	1121
190,264	Wetmore, William W., and T. G. Bennett, New Haven, Conn. Magazine fire-arm	May 1, 1877	147	43	11	765
	Wetzel, George H. (*See* Hawkens & Wetzel.)					
190,105	Wevel, Henry, East Attleborough, Mass. Ornamental chain	Apr. 24, 1877	1149	349	11	732
197,578	Weyhe, Wilhelm, Bremen, Germany. Steam-pump	Nov. 27, 1877	903	{268 269	{12	916
198,720	Whaley, George L., Bachelor, and J. R. Hassler, Shamrock, Mo. Fire-escape	Dec. 25, 1877	1038	316	12	1121
194,751	Wharton, Henry L., Youngstown, Ohio. Billiard-chalk holder	Aug. 28, 1877	987	293	12	390
	Wharton Railway Switch Company. (*See* Johnston, Edward H., assignor.)					
197,436	Wharton, Samuel C., Warsaw, Ind. Sand-bar	Nov. 20, 1877	740	221	12	885
189,162	Wharton, William A., assignor to self and H. E. Lambert, Bell Center, Ohio. Felly	Apr. 3, 1877	129	46	11	577
193,790	Wharton, William E., Lawson, Mo. Thief and robber trap	July 31, 1877	1294	388	12	222
197,915	Wharton, William, jr., Philadelphia, Pa. Railway-switch	Dec. 4, 1877	209	63, 64	12	976
198,229	Same.....same	Dec. 18, 1877	548	169	12	1040
	Wheary, William H. (*See* Beall, John T., assignor.)					
	Wheat, P. H., *et al.* (*See* Day, Timothy R., assignor.)					
189,291	Wheaton, Hiram, Allegany, N. Y. Bee-hive	Apr. 3, 1877	265	87	11	593
192,314	Wheaton, Milton A., San Francisco, Cal. Car-propeller	June 19, 1877	836	254	11	1103
196,960	Wheeden, James C., Baltimore, Md. Buoying vessels	Nov. 6, 1877	228	68	12	792
	Wheeler & Wilson Manufacturing Company. (*See* Dimond, George H., assignor.)					
	Same.....(*See* Beers, Philo M., assignor.)					
	Wheeler, Edgar L. (*See* McCarter & Wheeler.)					
198,230	Whelan, Frank, San Francisco, Cal. Braiding-machine	Dec. 18, 1877	549	169	12	1041
189,978	Whelan, George W., Sun Prairie, Wis. Shovel and tongs	Apr. 24, 1877	1002	306	11	{713 714
190,458	Wheeler, Elisha H., Canton, Mo. Brake-lever	May 8, 1877	363	105	11	802
193,202	Wheeler, Franklin, Berlin, N. H. Adjustable gage for saw-mills	July 17, 1877	659	201	12	118
188,272	Wheeler, Fred. F., Ashby, Mass. Thill-coupling	Mar. 13, 1877	314	99	11	428
193,203	Wheeler, Frederick G., New York, N. Y. Method of and apparatus for treating cotton, &c	July 17, 1877	660	202	12	118
192,723	Wheeler, George, Newark, Ohio. Hog-elevator	July 3, 1877	166	48	12	36
	Wheeler, Harry E. (*See* Cherry & Wheeler.)					
	Wheeler, Henry F. (*See* Fox & Wheeler.)					
	Wheeler, James H. (*See* Horrie, David, assignor.)					
190,800	Wheeler, John C., assignor to Thompson, Perley & Waite, Baldwinsville, Mass. Nursery-chair	May 15, 1877	716	212	11	855
	Wheeler, John E. (*See* Corbett, Edward, assignor.)					
	Same.....(*See* Corbett, Coy & Wheeler.)					
	Same.....(*See* Loring, David B., assignor.)					
192,665	Wheeler, John E., Lynn, and F. W. Coy, Boston, Mass. Machine for feeding horse-shoe-nail blanks	July 3, 1877	119	33	12	28
192,666	Wheeler, John E., Lynn, D. B. Loring and F. W. Coy, Boston, Mass. Machine for making horseshoe-nails	July 3, 1877	121	33	12	28
188,452	Wheeler, John R., Warren Township, Iowa. Bee-hive	Mar. 13, 1877	497	154	11	454
187,440	Wheeler, Leonard H., jr., Beloit, Wis. Windmill	Feb. 13, 1877	524	162	11	284
	Wheeler, Madden, & Clemson Manufacturing Company. (*See* Boynton, Eben M., assignor).....(Reissue.)					
	Same.....(*See* Neimeyer, Jacob, assignor).....(Reissue.)					
	Wheeler, Moses W., *et al.* (*See* Sanders, Henry M., assignor.)					
188,450	Wheeler, Norman W., New York, N. Y. Pump	Mar. 13, 1877	494	153	11	453
189,290	Same.....Valve for steam pumping-engine	Apr. 3, 1877	262	87	11	593
	Wheeler, Owen T. (*See* Breeden & Wheeler,)					
187,947	Wheeler, Samuel H., San Francisco, Cal. Valve-gear for steam-engines	Feb. 27, 1877	1045	322	11	369
187,497	Wheeler, Seth, Albany, N. Y. Barrel-head	Feb. 20, 1877	592	183	11	301
188,451	Same.....Indicator	Mar. 13, 1877	496	154	11	454
190,654	Same.....Process and apparatus for molding paper-pulp	May 8, 1877	562	167	11	828

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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7,899	Wheeler, Sidney S., and D. B. Manley, assignors, by mesne assignments, to National Hat Pouncing Machine Company, New York, N. Y. Machine for pouncing hats. (Reissue)	Oct. 2, 1877	184	53	12	588
187,439	Wheeler, William H., Beloit, Wis. Windmill	Feb. 13, 1877	522	161	11	284
193,738	Wherry, John R., Little Rock, Ark. Lawn-seat	July 31, 1877	1236	371	12	215
7,665	Whipple, Archibald M., North Adams, Mass. Shifting-rail for carriages (Reissue)	May 8, 1877	575	170	11	829
189,822	Whipple, Charles S., assignor to self and G. W. Goddard, New London, Conn. Door-check	Apr. 17, 1877	824	254	11	682
189,823	Same same	Apr. 17, 1877	825	255	11	682
189,824	Same same	Apr. 17, 1877	825	255	11	682
189,825	Same same	Apr. 17, 1877	826	255	11	682
197,577	Same same	Mar. 27, 1877	902	268	12	916
7,769	Whipple, Clarence F., Grand Rapids, Wis. Wagon bound and tongue (Reissue)	June 26, 1877	1100	333	11	1150
188,486	Same Hame-fastener	Nov. 20, 1877	539	166	11	468
197,986	Whipple, Clarence F. and E. E., Chicago, Ill. Draft attachment for wagons	Dec. 11, 1877	287	88	12	996
189,292	Whipple, Edmund C., Davenport, Iowa. Blind-slat worker	Apr. 3, 1877	266	87	11	593
	Whipple, Effinger E. (*See* Whipple, Clarence F. and E. E.)					
194,752	Whipple, Joel N., Volga City, Iowa. Carriage-top	Aug. 28, 1877	988	293	12	390
194,020	Whipple, John A., Cambridge, Mass. Thill-coupling	Aug. 7, 1877	224	66	12	264
187,741	Whipple, William, Carbon, Iowa. Wheel-harrow	Feb. 27, 1877	843	262	11	342
193,359	Whitaker, John A., Hamilton, Ohio, assignor to self, D. Gray, and A. A. Brown. Buffer-handle for furniture	July 24, 1877	849	260	12	151
194,116	Whitbeck, George V. H., Phelps, N. Y. Attaching colters to plows	Aug. 14, 1877	356	105	12	288
190,106	Whitcomb, Nehemiah C., Oak Hill, N. Y. Stove-pipe damper	Apr. 24, 1877	1149	350	11	732
197,002	Whitcomb, William W., and J. C. Daggett, Boston, Mass. Overgaiter	Nov. 13, 1877	283	83, 84	12	808
197,917	Whitcomb, William W., Boston, Mass. Boot and shoe	Dec. 4, 1877	213	65	12	976
194,201	White, Adonijah J., Castile, N. Y. Spring-seat and reach for vehicles	Aug. 14, 1877	432	131	12	299
	White, Arthur W. (*See* Cummings, Uriah, assignor.)					
	White, Charles H. (*See* Jahne & White.)					
197,439	White, Charles H., New York, N. Y. Bearing for shears and pulleys	Nov. 20, 1877	744	222	12	885
	White, Edward L. (*See* Carroll, Thomas J., assignor.)					
	White, Elbert. (*See* Lockwood, Stephen F., assignor.)					
196,610	White, George F., Middletown, N. Y. Nursing apparatus	Oct. 30, 1877	976	284	12	734
197,580	Same Dish-washer	Nov. 27, 1877	804	269	12	916
186,071	White, George P., Pompton, N. J. Music-stool	Jan. 9, 1877	260	78	11	51
	White, George W. (*See* Crosby & White.)					
190,173	White, Henry T., Buford, Ohio. Pruning-shears	May 1, 1877	64	17	11	754
188,709	White, Hiram J., assignor, D. B. Morey, and W. C. Smith, Boston, Mass. Spice-box	Mar. 20, 1877	749	230	11	497
188,554	White, Hiram J., assignor to D. K. Alden, Boston, Mass. Table salt-bottle	Dec. 25, 1877	877	267	12	1097
196,962	White, Hiram W., Yankton, Dak. Chin-rest for violins	Nov. 6, 1877	230	69	12	792
188,453	White, Hubbard C., Versailles, Ky. Compensating pitman-connection journal or axle	Mar. 13, 1877	498	154	11	454
190,655	White, Hugh, assignor of part interest to C. H. Fargo, J. Benham, C. E. and S. M. Fargo, Chicago, Ill. Boot and shoe	May 8, 1877	564	167	11	828
196,173	White, James, Cincinnati, Ohio. Spindle for safe and vault doors	Oct. 16, 1877	512	149	12	649
197,579	White, James, North Adams, Mass. Spindle and its bearings	Nov. 27, 1877	904	269	12	916
195,065	White, James E., Cincinnati, Ohio. Fare-box	Sept. 11, 1877	320	97	12	452
185,995	White, James H., assignor to Manhattan Brass Company, New York, N. Y. Fastening for traveling-bags	Jan. 2, 1877	181	56	11	32
	White, John, *et al.* (*See* Cummings, Samuel M., assignor.)					
186,027	White, John, Buffalo, N. Y. Grain drying-kiln	Jan. 9, 1877	218	66	11	46
193,433	White, John, Norwich, N. Y. Tilting chair	July 24, 1877	917	279	12	161
	White, John W. (*See* Farmer, James C., assignor.)					
	White, Jonathan, *et al.* (*See* Gamble, James W., assignor.)					
	White, Joseph, *et al.* (*See* Fields, Daniel G., assignor.)					
191,788	White, Joseph C., New York, N. Y. Twine-holder	June 12, 1877	271	84	11	1018
186,220	White, Joseph P., Savannah, Ga. Cartridge	Jan. 16, 1877	410	126	11	78
186,391	Same Shot-cartridge	Jan. 16, 1877	593	182	11	100, 101
	White, Leonard. (*See* Hess, Jacob, assignor.)					
187,699	White, Leonard A., and G. W. Lewin, assignors to selves and J. B. Warner, North Dighton, Mass. Tea-kettle	Feb. 20, 1877	768	238	11	324
7,633	White, Le Roy S., assignor to Brown & Brothers, Waterbury, Conn. Manufacture of table forks and spoons (Reissue)	Apr. 24, 1877	1170	354	11	735
7,699	Same Spoon and fork (Reissue)	May 22, 1877	1150	345	11	921
7,700	Same Table-fork (Reissue)	May 22, 1877	1151	345	11	921
192,801	Same Blank for table-forks	July 3, 1877	246	72	12	45
186,651	White, Luther C., Jasper, Tex. Blow-gun and arrow	Jan. 23, 1877	848	262	11	148
196,961	White, Lyman T., assignor to M. E. White, Eaton Rapids, Mich. Car-heater	Nov. 6, 1877	229	68, 69	12	792
	White Manufacturing Company *et al.* (*See* Boudren, Thomas, assignor.)					
	White Manufacturing Company. (*See* Wigley, Thomas, assignor.)					
	White, Mary E. (*See* White, Lyman T., assignor.)					
193,061	White, Watthew B., Manchester, N. H. Sight for fire-arms	July 10, 1877	317	156	12	91
7,761	White, Nelson B., South Dedham, Mass., assignor, by mesne assignments, to Empire Wringer Company, Auburn, N. Y. Clothes-wringer (Reissue)	June 19, 1877	853	260	11	1106
188,710	White, Norman S., Millerstown, Pa. Railway chair and tie	Mar. 20, 1877	750	230	11	497
190,942	White, Orpheus, assignor of one-half interest to A. Lovett and A. H. Fieldman, Detroit, Mich. Change-box	May 15, 1877	354	253	11	873
188,086	White, Orsamus A., Norwalk, Ohio, Ironing-table	Mar. 6, 1877	120	36	11	397
188,703	White, Patrick F., assignor to self and H. C. Black, Western Port, Md. Vehicle-axle	Mar. 20, 1877	748	230	11	497
	White, Peter. (*See* Kupferle & White.)					
195,780	White, Robert, Brooklyn, and R. Wallace and D. Moritz, New York, N. Y. Pump	Oct. 2, 1877	82	25	12	573
195,781	Same Wall-pump	Oct. 2, 1877	85	25	12	573
188,996	White, Robert J. and R. N., Washington, Pa. Car-coupling	Mar. 27, 1877	1048	323	11	546
	White, Robert N. (*See* White, Robert J. and R. N.)					
	White, Samuel S. (*See* Black, Greene V., assignor.)					
	White, Samuel S. (*See* Gilbert, John W., assignor.)					
	Same (*See* Starr, Eli T., assignor.)					
	Same same (Reissue.)					
	Same (*See* Tripp, George W., assignor.)					
	Same (*See* Wiegand, S. Lloyd, assignor.)					
187,573	White, Samuel S., Philadelphia, Pa. Dental chair	Feb. 20, 1877	656	204	11	310
	White Sewing Machine Company. (*See* Baker, George W., assignor.)					
	Same (*See* Porter D'Arcy, assignor.)					
195,681	White, Solomon W., New Lexington, Ohio. Vegetable-cutter	Sept. 25, 1877	946	282	12	558

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
	White, Taylor, *et al* (*See* Fields, Daniel G., assignor.)					
191,499	White, Thomas, Quincy, Ill. Heating-stove	May 29, 1877	1428	430	11	965
198,438	White, Thomas R., Baltimore, Md. Gas apparatus	Dec. 18, 1877	754	228	12	1071
186,652	White, Ulysses G., Washington, D. C. Curry-comb	Jan. 23, 1877	849	262	11	148
186,650	White, Washington, New York, N. Y. Folding bier	Jan. 23, 1877	847	262	11	147, 148
	White, William. (*See* Davis & White.)					
193,904	White, William F., Ashburnham, Mass. Painters' palette	Aug. 7, 1877	103	33	12	249
	White, William H. (*See* Frost, Zarda, assignor.)					
193,306	White, William W., McKean County, Pa. Protecting emery wheels	July 17, 1877	778	238, 239	12	133
192,316	White, Zachariah J., Blanchester, Ohio. Potato cutter and dropper and corn-planter	June 19, 1877	840	255	11	1103
189,821	White, Thomas J., Philadelphia, Pa. Combined seed-drill and harrow	Apr. 17, 1877	823	254	11	681
7,957	Whiteford, David, Chicago, Ill. Lamp (Reissue)	Nov. 20, 1877	759	226	12	888
188,998	Same same	Mar. 27, 1877	1049	323	11	546
188,999	Same same	Mar. 27, 1877	1050	323	11	546
187,073	Whitehall, Nicholas, Newtown, Ind. Convertible seeder and cultivator	Feb. 6, 1877	147	49	11	223
7,762	Whitehall, Robert, New York, N. Y. Sewing-machine (Reissue)	June 19, 1877	860	260	11	1106
188,711	Whitehead Alfred E., Brooklyn, N. Y. Can or pail top with opener	Mar. 20, 1877	730	231	11	497
194,980	Whitehead, Edward, Cincinnati, Ohio. Velocipede	Sept. 11, 1877	236	72	12	440
	Whitehead, William A. (*See* Underwood, Joseph B., assignor.)					
	Whitehead, William E., *et al.* (*See* Gilchrist & Anderson, assignors.)					
190,107	Whitehead, William E., Miles Plattin, England, and A. T. Atherton, Lowell, Mass. Machine for opening and cleaning cotton	Apr. 24, 1877	1150	350	11	732
	Whitehouse, William. (*See* Manuel & Whitehouse.)					
195,319	Whitehouse, William T., Boston, Mass. Sliding-blade sheath-knife	Sept. 18, 1877	590	173	12	499
198,062	Whiteley, William M., Joplin, Mo. Double-acting pump	Dec. 11, 1877	356	110	12	1007
191,016	Whiteley, William N., Springfield, Ohio. Mower	May 22, 1877	948	280, 281, 282	11	893
197,192	Same Harvester	Nov. 13, 1877	480	142, 143	12	837
197,916	Same Mower	Dec. 4, 1877	211	64, 65	12	976
	Whiteman, Frank M. (*See* Whiteman, Herbert R., assignor.)					
196,062	Whiteman, Herbert R., assignor of one-half interest to F. M. Whiteman, Cleveland, Ohio. Cigar-lighter	Oct. 9, 1877	385	110	12	623
188,762	Whiteman, Louis P., New York, N. Y., and B. M. Gerardin, Jersey City, N. J., assignors to W. B. Whiteman, New York, N. Y. Drawer-pull	Mar. 27, 1877	811	248	11	514
	Whiteman, William B. (*See* Whiteman & Gerardin, assignors.)					
	Whiteside, Martin P. (*See* Mattson, Francis B, assignor.)					
	Whiteside, William M. (*See* Knight & Whiteside.)					
191,212	Whitesides, Samuel, West Depere, Wis. Saw sharpening and setting machine	May 22, 1877	1133	339, 340	11	919
	Whitin, Charles E., trustee, *et al.* (*See* Skinner & Bonnet, assignors) (Reissue.)					
188,997	Whiting, Andrew F., Norwich, Conn. Seal-bolt	Mar. 27, 1877	1048	323	11	546
196,410	Whiting, Edwin B., and F. E. Baum, Orange, N. J. Hat-pouncing machine	Oct. 23, 1877	762	220	12	693
195,862	Whiting, James M., Providence, R. I. Vehicle-hub	Oct. 2, 1877	172	48	12	585
190,801	Whiting, James R., New York, N. Y. Composition hop extract	May 15, 1877	717		11	855
7,846	Whiting, John L., Boston, Mass. Brush (Reissue)	Aug. 14, 1877	524	158	12	310
190,941	Same Machine for making brush-handles	May 15, 1877	353	253	11	873
192,802	Same Brush-machine	July 3, 1877	247	72	12	45
	Whiting, Joseph C. (*See* Quinby & Whiting) (Reissue.)					
187,742	Same (*See* Quinby & Whiting.)					
187,948	Whiting, William B., Waukesha County, Wis. Construction of hulls of vessels	Feb. 27, 1877	844	263	11	343
197,438	Whiting, William B., United States Navy. Chain-propeller for vessels	Feb. 27, 1877	1046	322	11	369
	Whitlock, Sturges, Birmingham, Conn. Mechanical movement	Nov. 20, 1877	743	222	12	885
188,216	Whitman & Burrell *et al.* (*See* Barber & Porter, assignors.)					
192,473	Whitman, Charles, assignor of one-half interest to R. and G. H. Dunbar, Buffalo, N. Y. Oscillating valve	Mar. 6, 1877	252	79	11	413
194,202	Whitman, Gilbert P., Rockport, Mass. Spindle	June 26, 1877	1002	302	11	1137
198,439	Whitman, Royal E., Springfield, Mass. Bridle-bit	Aug. 14, 1877	433	131	12	299
196,406	Whitman, William G., Chicago, Ill. Fruit-jar cover	Dec. 18, 1877	755	228	12	1071
	Whitman, William L., and E. Manes, Ringgold, Ga. Automatic wagon-brake	Oct. 23, 1877	759	219	12	692
185,881	Whitmarsh, William W. (*See* Putnam, Silas S., assignor.)					
187,949	Whitmore, Andrew E., Ilion, N. Y. Revolving fire-arm	Jan. 2, 1877	65	20	11	17
194,493	Whitmore, George E, New Haven, Conn. Imitation-lamp for carriages	Feb. 27, 1877	1048	322	11	370
	Whitmore, Seth H., Cincinnati, Ohio, assignor of one-half interest to F. C. Wells, Chicago, Ill. Valve for steam-engines	Aug. 21, 1877	737	219	12	346
	Whitney, Amos, *et al.* (*See* Horton, Emmet, assignor.)					
	Whitney, Charles F. (*See* Whitney, Hezekiah and C. F.)					
	Whitney, Eli. (*See* Tiesing, Frank W., assignor.)					
197,191	Whitney, George B., North Attleborough, Mass. Machine for making chains	Nov. 13, 1877	478	141, 142	12	837
191,498	Whitney, Henry A., Cincinnati, Ohio. Gas-burner	May 29, 1877	1428	430	11	964
189,163	Whitney, Hezekiah and C. F., Oswego, N. Y. Horse-collar	Apr. 3, 1877	129	46	11	577
	Whitney, Joshua S. (*See* Burt & Whitney.)					
	Whitney, Lewis C., *et al.* (*See* Stockder, Charles E., assignor.)					
195,066	Whitney, Pardon A., Southington, Conn. Sheet-metal roller-seaming-machine	Sept. 11, 1877	321	97	12	452
192,317	Whiton, David W., Thomas and C. F. Hough, assignors to M. F. Whiton, Hingham, Mass Rope-machine	June 19, 1877	811	255	11	1103
191,787	Whiton, Eliza L., West Stafford, Conn. Stove-polish	June 12, 1877	270		11	1018
	Whiton, Morris F. (*See* Whiton, Thomas, & Hough, assignors.)					
186,649	Whitson, Willet P., Brooklyn, N. Y. Refrigerator	Jan. 23, 1877	846	232	11	147
186,648	Whittaker, Charles, Milwaukee, Wis. Hat-rack and seat combined	Jan. 23, 1877	846	231	11	147
	Whittaker, George. (*See* Ayres & Whittaker.)					
197,437	Whittaker, James W., assignor of one-half interest to W. P. Street, Philadelphia, Pa. Screw-propeller	Nov. 20, 1877	741	221	12	885
197,068	Whittaker, Richard, Toronto, Canada. Watch	Nov. 13, 1877	349	103	12	818
196,847	Whittaker, Thomas, Passaic, N. J. Cut-off valve	Nov. 6, 1877	110	34	12	776
188,035	Whittemore, Amos, Cambridgeport, Mass. Peg-float	Mar. 6, 1877	83	23–24	11	391
7,605	Whittemore, John R., Chicopee Falls, Mass. Feed-cutter (Reissue)	Apr. 10, 1877	547	170	11	638
194,021	Whittemore, Richard E., Essex, Conn. Medicated soap	Aug. 7, 1877	225		12	264
192,315	Whittemore, Samuel E., and W. A. Green, Bristol, R. I. Top-roll for spinning-machinery	June 19, 1877	839	254	11	1103

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
	Whittlesey, John E., *et al.* (*See* Hoffman, Austin D., assignor.)					
195,861	Whitwell, Thomas, Stockton-on-Tees, England. Valve for hot-blast pipes	Oct. 2, 1877	171	48	12	585
192,207	Whyler, Edward M., Hays City, Kans. Scale-pan	June 19, 1877	713	218	11	1087
194,753	Whyte, Thomas, Saint Louis, Mo. Wagon-brake	Aug. 28, 1877	988	293	12	390
	Whyte, Nicholas, deceased. (*See* English & Whyte.)					
	Whyte, Rosanna, administratrix. (*See* English & Whyte.)					
188,555	Wiard, Edward, assignor to B. F. Avery, Louisville, Ky. Plow	Mar. 20, 1877	600	185	11	477
189,885	Wiard, George, and C. W. Hough, East Avon, assignors to Wiard Plow Company, Batavia, N. Y. Plow	Apr. 24, 1877	915	279	11	702
197,918	Wiard, Harry, Syracuse, N. Y. Plow	Dec. 4, 1877	214	66	12	976
	Wiard Plow Company. (*See* Wiard & Hough, assignors.)					
	Same. (*See* Wiard, Thomas, assignor.)					
187,950	Wiard, Thomas, East Avon, assignor to Wiard Plow Company, Batavia, N. Y. Plow	Feb. 27, 1877	1048	323	11	370
188,712	Wiarda, John, Greeu Point, N. Y. Counterfeit-coin detecter	Mar. 20, 1877	751	231	11	497
187,498	Wibberley, John T., Newark, N. J. Spool-winding machine	Feb. 20, 1877	593	184	11	301
196,730	Wick, John P., Parma, Ohio. Baby-walker	Oct. 30, 1877	1095	318	12	750
189,000	Wickers, John L., Chicago, Ill. Perforating-stamp	Mar. 27, 1877	1051	324	11	546
189,001	Wickes, James H., New York, N. Y. Refrigerator-car	Mar. 27, 1877	1052	324	11	546
197,069	Wickham, Conrad W., Wheeling, W. Va. Monument	Nov. 13, 1877	352	104	12	819
196,063	Wickham, Horace, jr., Waukegan, Ill. Grinding-machine	Oct. 9, 1877	386	110, 111	12	623
187,789	Wickham, James E., Watchemoket, R. I. Toaster and broiler	Feb. 27, 1877	891	277	11	349
192,803	Wicks, William A., Baltimore, Md. Process and apparatus for canning fruits, vegetables, &c	July 3, 1877	248	73	12	45
197,440	Same. Sheet-metal-can machine	Nov. 20, 1877	745	222	12	885
7,460	Wickwire, Chester F., Cortland, N. Y. Corn-popper (Reissue)	Jan. 9, 1877	379	116	11	66
186,778	Same. Flour-sifter	Jan. 30, 1877	974	302	11	174
189,002	Widdup, Young, and S. J. Thompson, Newark, N. J. Let-off mechanism for looms	Mar. 27, 1877	1054	324	11	546
196,809	Widger, Lafayette, and L. Patterson, Parker City, Pa. Sand-pump	Oct. 23, 1877	867	270	12	706
194,022	Widmayer, William F., New York, N. Y. Rotary fly for printing-presses	Aug. 7, 1877	225	67	12	264
198,479	Same. Rotary printing-machine	Dec. 25, 1877	808	245, 246	12	1087
198,502	Same. same	Dec. 25, 1877	832	252, 253	12	1090
	Widmer, Ulrich, *et al.* (*See* Hefferman, Pierce, assignor.)					
	Wiecher's Sugar Refining Company *et al.* (Elmenhurst, Walter R., assignor.)					
196,848	Wiegand, Conrad, Virginia City, Nev. Separating metals	Nov. 6, 1877	111	34	12	777
	Wiegand, S. Lloyd. (*See* Coppuck & Wiegand.)					
191,500	Wiegand, S. Lloyd, assignor to S. S. White, Philadelphia, Pa. Valve	May 29, 1877	1429	431	11	965
197,707	Wielkerson, Basil M., Baltimore, Md. Apparatus for raising and lowering articles of furniture	Nov. 27, 1877	1045	313	12	935
186,184	Wiener, Max, assignor to L. Dejonge & Co., Stapleton, N. Y. Machine for polishing paper	Jan. 9, 1877	366	112	11	65
195,682	Wiener, Oscar, assignor to Celluloid Harness Trimming Company, Newark, N. J. Composition-covered buckle	Sept. 25, 1877	947	283	12	558
190,395	Wiesebrock, Frederick W., Brooklyn, N. Y. Soda-water apparatus	May 1, 1877	283	83	11	783
190,396	Same. Automatic carbonic-acid-gas generator	May 1, 1877	286	84	11	783
189,979	Wieser, Louis, Washington, D. C. Arithmetical toy	Apr. 24, 1877	1002	307	11	714
192,474	Wiestling, George B., Mount Alto, Pa. Lagging for covering steam-pipes	June 26, 1877	1002	302	11	1137
193,791	Wietlisbach, Paterson, N. J. Braiding-machine	July 31, 1877	1295	388, 389	12	223
187,074	Wiggers, Henry H., Cincinnati, Ohio. Desk	Feb. 6, 1877	149	49	11	223
192,532	Wiggin, John L., assignor to self and L. B. Wadleigh, Lyons, Iowa. Animal-catcher	June 26, 1877	1088	329	11	1148
188,556	Wiggins, Charles P., Saint Louis, Mo. Relief and safety stop-valve	Mar. 20, 1877	601	185	11	477
193,903	Wiggins, Jefferson G., Seneca Falls, N. Y. Door and alarm-bell	Aug. 7, 1877	104	33	12	249
197,706	Wigginton, Henry T., Auxvass, Mo. Animal-trap	Nov. 27, 1877	1044	313	12	935
	Wight, Charles H., trustee. (*See* Richards, Theron A., assignor.)					
194,632	Wight, George R., New York, N. Y. Mucilage-holder	Aug. 28, 1877	869	259	12	374
	Wight, Peter B. (*See* Drake & Wight.)					
197,507	Wight, William S., Garrettsville, Ohio. Pantographic engraving-machine	Nov. 27, 1877	831	248	12	906
194,794	Wightman, Joseph C., Boston, Mass. Sheep-shears	Sept. 4, 1877	39	13	12	406
186,183	Wightman, Ransford B., Herkimer, N. Y. Feather-renovator	Jan. 9, 1877	366	112	11	65
195,683	Wigley, Thomas, assignor of one-half interest to White Manufacturing Company, Bridgeport, Conn. Carriage-lantern	Sept. 25, 1877	947	283	12	558
192,724	Wike, Elam, Dayton, Ohio. Lock for doors	July 3, 1877	167	48	12	36
198,555	Wilber, Isaac L., Taunton, Mass. Mechanism for operating the harnesses of fancy looms	Dec. 25, 1877	877	267, 268	12	1097
	Wilbraham, Thomas, *et al.* (*See* Wilbraham, John W., assignor.)					
190,943	Wilbraham, John W., assignor to self, T. and J. Wilbraham, Philadelphia, Pa. Blowing-machine	May 15, 1877	855	253	11	873
	Wilbraham, Thomas, *et al.* (*See* Wilbraham, John W., assignor.)					
	Wilbur, Edward R. (*See* Hebert & Wilbur.)					
	Wilcox, Albert. (*See* Crocker & Wilcox.)					
	Wilcox, Augustus S. (*See* Wilcox, Elijah D. and A. S.)					
	Wilcox, Carlos. (*See* Curran, John J., assignor.)					
	Wilcox, Charles E. (*See* Oberholtzer & Wilcox.)					
186,392	Wilcox, Dutee, Providence, R. I. Button	Jan. 16, 1877	594	182	11	101
196,849	Wilcox, Edward M., assignor to L. A. Winchester and J. S. Partridge, Whitewater, Wis. Check-row attachment for corn-planters	Nov. 6, 1877	115	34	12	777
187,075	Wilcox, Elihu, assignor to D. S. Morgan, Brockport, N. Y. Harvester-rake	Feb. 6, 1877	170	50	11	223
198,446	Wilcox, Elijah D. and A. S., Millville, Mass. Flock-cutting machine	Dec. 18, 1877	756	220	12	1071
194,280	Wilcox, Harlow M., R. J. Percy, and J. F. Daggett, assignors, by mesne assignments, to L. K. Woodbridge, Chicago, and C. V. Daggett, Elgin, Ill. Grocers' dish	Aug. 14, 1877	569	154	12	309
	Wilcox Silver Plate Company. (*See* Babbitt, S. William, assignor.)					
	Wilcox, Stephen. (*See* Babcock & Wilcox.)					
194,203	Wilcox, Van Rensselaer, A. Benedict, Perry, and G. Benedict, Cleveland, Ohio. Churn	Aug. 14, 1877	433	131	12	299
	Wilcox, V. M., *et al.* (*See* Buzby, Albert G., assignor.)					
191,820	Wilcox, William E., Cleveland, Ohio. Car-axle box	June 12, 1877	306	95	11	1022
	Wilcox, William R. (*See* Russell, Matthew C., assignor.)					
	Wilcoxon, Thompson. (*See* Lynn, William H., assignor.)					
191,738	Wild, James, Clifton Heights, assignor of one-half interest to E. Hey, Philadelphia, Pa. Stop-motion for spooling-machines	June 5, 1877	212	67	11	1005

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
188,454	Wilde, Charles W., Berlin, Mich. Feeding device for grain-drills	Mar. 13, 1877	500	155	11	454
	Wilde, Henry. (*See* Ketchum & Wilde.)					
193,204	Wilde, Henry, Manchester, England. Process and apparatus for coating metal rollers.	July 17, 1877	661	202	12	118
196,064	Wilder, Aretus A., assignor of one-half interest to C. B. Palmer, Detroit, Mich. Bolt-lock for rail-joints	Oct. 9, 1877	388	111	12	624
186,185	Wilder, Charles E., Worcester, Mass. Barrel-rest	Jan. 9, 1877	368	113	11	65
196,408	Wilder, Charles H., Boston, Mass., assignor to self and C. Leventhorp, New York, N. Y. Vessel for containing fluids under pressure	Oct. 23, 1877	761	219	12	693
191,629	Wilder, Charles O., Monmouth, Ill. Plow-clevis	June 5, 1877	110	34	11	991
195,436	Wilder, Lansford F., Sumner, Mich. Board fence	Sept. 18, 1877	692	205	12	514
	Wilder, Lyman. (*See* Farnum, William C., assignor.)					
195,911	Wilder, Moses G., Meriden, Conn., and W. H. McNeil, Lancaster, Mass., assignors to Pratt, Read & Co., Deep River, Conn. Machine for dressing piano-keys	Oct. 9, 1877	229	65, 66	12	601
187,790	Wilder, Salmon W., Lawrence, Mass. Machine for damping paper	Feb. 27, 1877	891	278	11	349
	Wildman, Benjamin F. (*See* Shuch & Wildman.)					
193,905	Wildrick, David L., and W. H. Darling, Newark, N. J. Burglar-alarm	Aug. 7, 1877	104	33	12	249
	Wile, Henry, *et al.* (*See* Clime, John C., assignor.)					
192,398	Wile, Henry, Philadelphia, Pa. Compound for the manufacture of crucibles	June 26, 1877	941		11	1128
	Wiles, Thomas A. (*See* Oliver & Wiles.)					
	Wiley & Russell Manufacturing Company. (*See* Smart, Albert J., assignor.)					
	Wiley, James F., *et al.* (*See* Atwood, Corydon F., assignor) (Reissue.)					
	Wiley, John A., *et al.* (*See* McGovern, Peter, assignor.)					
	Same (*See* Parkhurst, W. B., assignor.)					
	Same (*See* Stone, Joseph M., assignor.)					
187,951	Wiley, Moses H., Pittsburg, Pa. Machine for cutting bungs	Feb. 27, 1877	1049	323, 324	11	370
194,943	Wiley, William A., Rochester, Minn. Compound for graining wood	Sept. 4, 1877	188		12	426
196,611	Wiley, William A., Allegheny, Pa. Bung-extractor	Oct. 30, 1877	977	284	12	734
188,713	Wilhelm, Henry, and F. D. Davis, Minerva, Ohio. Diamond millstone-dressing machine.	Mar. 20, 1877	752	231	11	497
196,174	Wilhelm, John H., Denver, Colo. Ore washing and amalgamating machine	Oct. 16, 1877	513	149, 150	12	649
189,409	Wilkerson, Basil M., Baltimore, Md. Dental engine	Apr. 10, 1877	403	128	11	619
197,441	Same.....Dentists' chair	Nov. 20, 1877	746	223	12	885
191,628	Wilkie, Thomas, Albany, N. Y. Trap for balls	June 5, 1877	109	34	11	991
191,909	Wilkins, Isaac, jr., Green Point, N. Y. Carriage-body adjuster	June 12, 1877	386	120	11	1032
195,427	Wilkins, Morris D., Bloomington, Ill. Automatic receiving-table for printing-presses.	Sept. 18, 1877	693	205	12	514
	Wilkins, Royal P., *et al.* (*See* Spence, James F., assignor.)					
	Wilkins, William. (*See* Dost, Theodor, assignor.)					
193,062	Wilkinson, Asa W., New York, N. Y. Manufacture of illuminating-gas	July 10, 1877	518	156	12	91
190,459	Wilkinson, Henry, Colliusville, Conn. Screw-driver handle	May 8, 1877	363	105	11	802
193,434	Wilkinson, John D., Plattsburg, N. Y. Measuring-device for filling cartridges	July 24, 1877	917	279	12	161
187,499	Wilkinson, William, Toronto, Canada. Pocket-book	Feb. 20, 1877	596	185	11	301
	Wilkinson William G. (*See* Howard, Stanton M., assignor.)					
194,633	Wilke, George W., Roberson Fork, Tenn. Connecting-rod	Aug. 28, 1877	870	259	12	374
196,612	Will, Frederick A., and J. Finck, San Francisco, Cal. Skewer-puller	Oct. 30, 1877	977	284	12	734
189,588	Will, Henry, and C. Uebele, Chicago, Ill. Velocipede	Apr. 17, 1877	595	184	11	653
191,739	Willard, George, assignor of one-half interest to O. P. Abercrombie, Chicago, Ill. Fruit-crate	June 5, 1877	213	67	11	1005
188,557	Willard, Hosea, Vergennes, Vt. Weighing-scales	Mar. 20, 1877	601	186	11	477
191,392	Willard, William B., New York, N. Y. Shuttle-driving mechanisms for narrow-ware looms	May 29, 1877	1305	395	11	951
186,654	Willard, Zabdiel A., Boston, Mass. Process and apparatus for treating ores	Jan. 23, 1877	851	263	11	148
186,655	Same.....Preparing telluride ores for roasting	Jan. 23, 1877	853		11	148
189,535	Willbanks, David A., Monroe, Ga. Apparatus for teaching spelling	Apr. 10, 1877	522	164	11	635
196,175	Willcuts, Enos, Lamoille, Iowa. Fence-post	Oct. 16, 1877	516	150	12	649
195,194	Williams, Abijah J., assignor to J. H. and N. A. Williams, Utica, N. Y. Machine for forming the warp-eyes of wire heddles	Sept. 11, 1877	453	135	12	472
185,997	Williams, Absalom C., assignor to J. S. Perry, trustee and executor, N. B. Perry, and A. Dickey, Albany, N. Y. Cooking-stove or range	Jan. 2, 1877	182	56	11	32
195,735	Williams, Allan K., Rochester, Minn. Draft-equalizer	Oct. 2, 1877	47	14	12	567
186,698	Williams, Calvin J. and H. W., Caverna, Ky. Machine for setting plants	Jan. 30, 1877	901	279	11	164
	Williams, Charles, *et al.* (*See* Simonds, Calvin W., assignor.)					
192,804	Williams, Charles, Plainwell, Mich. Hay-rack	July 3, 1877	250	73	12	46
	Williams, Charles D. (*See* Taylor & Williams.)					
193,584	Williams, Craton H., New York, N. Y. Automatic feed-bridle	July 24, 1877	1067	320	12	180
198,063	Williams, Daniel, West Philadelphia, Pa. Sled-propeller	Dec. 11, 1877	357	111	12	1007
	Williams, Daniel G. (*See* Hogeland, Israel, assignor.)					
7,783	Williams, David E., Quincy, Ill. Cartridge (Reissue)	July 3, 1877	272	79	12	49
	Williams, Edward H., *et al.* (*See* Longstreth, Edward, assignor.)					
	Williams, Frank B. (*See* Kahler & Bichl, assignors.)					
	Same.....(*See* Mayall, Thomas J., assignor) (Reissue.)					
190,398	Williams, Frank L., Tamaroa, Ill. Nut-lock	May 1, 1877	287	84	11	783
193,064	Williams, George, Mystic Bridge, assignor of one-half interest to F. A. Holmes, Stonington, Conn. Car-axle box	July 10, 1877	520	157	12	91
189,164	Williams, Henry, Milwaukee, Wis. Feathering paddle-wheel	Apr. 3, 1877	130	47	11	577
	Williams, Henry S., *et al.* (*See* O'Neill, Charles Z., assignor.)					
	Williams, Henry W. (*See* Williams, Calvin J. and H. W.)					
	Williams, J. H., *et al.* (*See* Williams, Abijah J., assignor.)					
	Williams, James H., *et al.* (*See* Ethridge, Martin V. B., assignor.)					
	Williams, James M. (*See* Chadbourne, Charlee H., assignor.)					
	Williams, James W. (*See* Michio & Williams.)					
7,500	Williams, John, South Haven, Mich. Fruit-drier (Reissue)	Feb. 6, 1877	294	95	11	242
188,487	Williams, John, Le Roy, N. Y. Apparatus for sprinkling liquid poison on potato-vines	Mar. 20, 1877	546	166	11	468
188,488	Williams, John I., Millvale, Pa. Rotary puddling-furnace	Mar. 20, 1877	540	166, 167	11	468
190,397	Williams, John L., Jesup's Junction, Ga. Combination tool	May 1, 1877	286	84	11	783
190,656	Williams, John L., and A. Kerr, Harrison, N. J. Curtain-fixture	May 8, 1877	564	168	11	828
7,594	Williams, John W., New York, N. Y. Lock-work attachment for clocks (Reissue)	Apr. 3, 1877	290	92	11	596
198,441	Williams, Joseph, Sharpsburg, Pa. Car-ventilator	Dec. 18, 1877	758	229	12	1071
194,392	Williams, Josephine, Columbus City, Ind. Dyeing and coloring feathers, laces, and other fabrics	Aug. 21, 1877	629		12	332
193,063	Williams, Joseph S., Riverton, N. J. Railway-crossing	July 10, 1877	519	157	12	91
193,065	Same.....same	July 10, 1877	521	157	12	91
190,944	Williams, Levi E., Manquin, Va. Corn planter and cultivator	May 15, 1877	856	254	11	873

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
195,863	Williams, Michael W., Plymouth, Ohio. Weather-strip	Oct. 2, 1877	173	49	12	585
186,028	Williams, Miles, Wigan, England, Manufacture of gas	Jan. 9, 1877	218		11	46
	Williams, N. A., *et al.* (*See* Williams, Abijah J., assignor.)					
197,193	Williams, Oliver, Catasauqua, Pa. Utilizing Bessemer-steel scrap	Nov. 13, 1877	481	143	12	838
	Williams, Peleg. (*See* Tate, Isaac C., assignor.)					
	Williams, R., jr., *et al.* (*See* Fearon, Francis, assignor.)					
197,708	Williams, Richard D., Baltimore, Md. Revolving fire-arm	Nov. 27, 1877	1046	314	12	935
186,914	Williams, Richard S., New York, N. Y. Machine for folding gold-foil for dental purposes	Jan. 30, 1877	1113	113	11	192
191,740	Williams, Robert S., assignor of one-half interest to J. B. Martin, Milwaukee, Wis. Millstone-dress	June 5, 1877	214	68	11	1066
195,067	Williams, Roger, Yonkers, assigner to self and R. J. Anderson, New York, N. Y. Mustache-spoon	Sept. 11, 1877	322	97	12	452
	Williams, Ruth R., *et al.* (*See* Stanton, John W., assignor.)					
197,919	Williams, Samuel, Philadelphia, Pa. Car-brake	Dec. 4, 1877	215	66	12	976
	Williams, William. (*See* Hill, Pilliner & Williams.)					
190,802	Williams, William A., Cambria, Wis. Windmill	May 15, 1877	717	212	11	855
185,996	Williams, William H., Brandon, Vt. Heel-stiffener	Jan. 2, 1877	181	56	11	32
196,409	Williams, William L., New York, N. Y. Chimney-cap	Oct. 23, 1877	761	240	12	693
187,691	Williams, William O., Pierrepont Manor, N. Y. Wagon-brake	Feb. 20, 1877	769	239	11	324
	Williamson, James W. (*See* Green & Williamson.)					
189,980	Williamson, Oliver, Covington, Ohio. Picture-exhibitor	Apr. 24, 1877	1003	307	11	714
191,501	Willis, Asa, Brooklyn, N. Y. Manufacture of cigarettes	May 29, 1877	1430	431	11	965
189,330	Willis, Eben, Colton, N. Y. Sap spout	Apr. 10, 1877	332	106	11	609
	Willis, George A. (*See* Ellis & Willis.)					
187,952	Willis, George D., Caverna, Ky. Egg-carrier	Feb. 27, 1877	1051	324	11	370
187,335	Williston, John H., Marion, Ohio. Addressing-machine	Feb. 13, 1877	420	132	11	271
193,583	Willoughby, William P., Chariton, Iowa. Leather-punching apparatus	July 24, 1877	1066	319	12	180
195,864	Wills, William L., Big Lick, Va. Gate	Oct. 2, 1877	173	49	12	585
7,770	Willson, Daniel T., deceased, by H. and S. M. Willson, administrators, Harrisburg, Pa. Cider-mill (Reissue)	June 26, 1877	1102	333	11	1150
	Willson, Gile J., *et al.* (*See* Willson, Thomas A., assignor.)					
	Same (*See* Willson & Meigs, assignors.)					
	Willson, Hiram, administrator. (*See* Willson, Daniel T.) (Reissue.)					
187,208	Willson, Hodgen I., assignor to self and L. J. Russel, Harrisville, Tex. Rotary engine	Feb. 6, 1877	268	88	11	239
	Willson, Samuel M., administrator. (*See* Willson, Daniel T.) (Reissue.)					
193,739	Willson, Thomas A., assignor to self, G. J. Willson, and C. B. Bishop, Reading, Pa. Spectacle-frame	July 31, 1877	1237	371	12	215
195,193	Wilson, Thomas A., and G. W. Meigs, assignors to said Willson, G. J. Willson, and C. B. Bishop, Reading, Pa. Eyeglass-frame	Sept. 11, 1877	452	135	12	472
187,441	Wilmington, William, Toledo, Ohio. Car-wheel chill	Feb. 13, 1877	525	162	11	284
188,714	Same. Casting car-wheels	Mar. 20, 1877	754	232	11	497
188,715	Same same	Mar. 20, 1877	755	232	11	497
187,574	Wilmot, Don C., Boone, Iowa. Oil-stove	Feb. 20, 1877	658	205	11	310
195,195	Wilmot, Samuel R., Bridgeport, Conn. Lamp-chimney	Sept. 11, 1877	455	136	12	472
195,241	Same. Lamp-burner	Sept. 18, 1877	519	151	12	489
186,653	Wilson, Aaron, Tekama, Nebr., assignor of one-half interest to C. B. Telyea. Corn-harvester	Jan. 23, 1877	850	263	11	148
187,209	Wilson, Alexander, assignor of one-half interest to A. O. Ahlenius, Galesburg, Ill. Bakers' oven	Feb. 6, 1877	269	88	11	239
191,213	Wilson, Alexander, Sheffield, England. Combined cupola-furnace and hot-blast oven	May 22, 1877	1134	340	11	919
193,360	Wilson, Alexander, and A. O. Ahlenius, Galesburg, Ill. Bakers' oven	July 24, 1877	849	260	12	151
	Wilson, C. C., *et al.* (*See* Essig, Bartholomew, assignor.)					
193,740	Wilson, Christopher J., Macon, Ga. Saw	July 31, 1877	1237	371	12	215
196,850	Same same	Nov. 6, 1877	115	34	12	777
190,657	Wilson, Daniel A., Glens Falls, N. Y. Halter-clamp	May 8, 1877	565	168	11	828
	Wilson, David M. (*See* Bourke, Martin, assignor.)					
193,361	Wilson, Erasmus, assignor to self and J. H. Lindsay, Allegheny, Pa. Bale-tie	July 24, 1877	850	260	12	151
	Wilson, F. Cortez. (*See* Evendon, John G., assignor) (Reissue.)					
188,222	Wilson, F. Cortez, Chicago, Ill. Can-top	Mar. 6, 1877	258	80	11	414
8,011	Wilson, George, Toledo, Ohio. Case for transporting bottles and bottled liquids. (Reissue)	Dec. 25, 1877	1063	323	12	1124
	Wilson, George A. (*See* Duncan & Wilson.)					
	Wilson, George F. (*See* Cattin & Wilson.)					
	Same (*See* Tartt & Wilson.)					
194,318	Wilson, George T., Russellsburg, Pa. Device for holding sheep	Aug. 21, 1877	563	169	12	323
190,460	Wilson, George H., Davenport, Iowa. Gang-plow	May 8, 1877	564	166	11	802
192,553	Wilson, George S., Malvern, and J. Rhode, Tabor, Iowa. Grasshopper-catcher	June 26, 1877	1088	329	11	1148
191,214	Wilson, George W., assignor of one-half interest to F. Emery, Chicago, Ill. Car-coupling	May 22, 1877	1135	341	11	919
198,480	Wilson, George W., Chicago, Ill. Motor	Dec. 25, 1877	810	245	12	1028
188,087	Wilson, Henry S., Fernandina, Fla. Cross-tie for railways	Mar. 6, 1877	121	36	11	396
	Wilson, Henry W. (*See* Gandy & Wilson.)					
190,529	Wilson, Henry W., West Covington, Ky. Vapor-burner	May 8, 1877	430	126	11	810
188,716	Wilson, Isaac A., Zanesville, Ohio. Cigar-bundler	Mar. 20, 1877	757	232	11	498
	Wilson, James. (*See* Wilson, James E., assignor.)					
188,558	Wilson, James E., assignor to J. Wilson, Bridgeport, Conn. Fluting-machine	Mar. 20, 1877	602	186	11	477
	Wilson, James F. (*See* Swift & Wilson.)					
189,981	Wilson, James F. and R. I., Calhoun, Ga. Plow	Apr. 24, 1877	1003	307	11	714
192,208	Wilson, James L., assignor to J. Forrest, Woodstock, Canada. Grain-reducing apparatus	June 19, 1877	714	219	11	1087
195,865	Wilson, Jerry P., Manchester, Iowa. Fan-blower	Oct. 2, 1877	174	49	12	585
	Wilson, John. (*See* Saur & Wilson.)					
7,926	Wilson, John A., Chicago, Ill. Sheet-metal can (Reissue)	Oct. 23, 1877	880	254	12	708
194,942	Wilson, John H. H., Saugus, Mass. Nutmeg-grater	Sept. 4, 1877	187	57	12	426
187,336	Wilson, John J., New York, N. Y. Corset-dummy	Feb. 13, 1877	421	132	11	271
193,666	Wilson, John N., Fulton, Ill. Suction and force pump	July 10, 1877	522	157	12	91
196,548	Wilson, John S., Indianapolis, Ind. Window-screen	Oct. 30, 1877	922	267	12	726
194,542	Wilson, John T., assignor to Wilson, Walker & Co., Pittsburg, Pa. Car-coupling	Aug. 28, 1877	794	236	12	363
194,543	Same same	Aug. 28, 1877	795	237	12	363
195,736	Same. Manufacture of draw-bars for railway-cars	Oct. 6, 1877	47	14	12	597
195,737	Same. Machine for bending truck-irons for railway-cars	Oct. 2, 1877	48	15	12	567
186,967	Wilson, Joseph S., Philadelphia, Pa., assignor of one-half interest to W. Cramp & Sons' Ship and Engine Building Company. Pumping-engine	Feb. 6, 1877	53	18	11	209

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
196,407	Wilson, Joseph S., Philadelphia, Pa., assignor to E. Brown. Speed-measure	Oct. 23, 1877	760	219	12	693
196,613	Wilson, Leonidas L., and Levi S. Keagle, Center Point, Iowa. Fishing and wharf lamp	Oct. 30, 1877	978	285	12	734
190,399	Wilson, Newton, High Holborn, England. Ruffling or plaiting attachment for sewing-machines	May 1, 1877	288	84	11	783
189,536	Wilson, Nicholas, Becket, Mass. Treating hides and skins	Apr. 10, 1877	523		11	635
	Wilson Packing Company. (*See* Gleason, George R., assignor.)					
	Wilson, Richard I. (*See* Wilson, James F. and R. I.)					
194,064	Wilson, Robert, P. J. Sorg, and J. Auer, Middletown, Ohio. Labeling plug-tobacco	Aug. 14, 1877	284	85	12	280
	Wilson Sewing-Machine Company. (*See* Rose, Reuben M., assignor.)					
189,003	Wilson, Smith M., Pittsburg, Pa. Cotton-bale tie	Mar. 27, 1877	1055	324	11	547
189,004	Same.....same	Mar. 27, 1877	1055	325	11	547
190,658	Wilson, Thomas A., Grayson, Cal. Sewing-machine housing	May 8, 1877	566	168	11	828
	Wilson, Walker & Co. (*See* Wilson, John T., assignor.)					
197,807	Wilson, Washington, New York, N. Y. Collar	Dec. 4, 1877	100	31	12	960
	Wilson, William A. (*See* Duncan & Wilson.)					
188,455	Wilson, William A., Chelsea, Mass. Cow-milker	Mar. 13, 1877	501	155	11	454
187,692	Wilson, William H., Westfield, N. Y., assignor of two-thirds interest to J. M. Stevens and R. D. Rockwell. Sectional steam-boiler	Feb. 20, 1877	769	239	11	324
	Wiman, Erastus. (*See* Smith & Moss, assignors.)					
187,076	Wimmer, Alexander W., New Haven, Conn. Apparatus for making patterns and molds	Feb. 6, 1877	151	51	11	223
190,659	Winans, Dorme C., New Haven, Conn. Manufacture of spectacle temples and joints	May 8, 1877	567	168	11	828
187,792	Winans, Thomas, Baltimore, Md. Ventilating and warming buildings	Feb. 27, 1877	894	278	11	349
188,325	Same.....Carriage-roof	Mar. 13, 1877	367	115	11	436
	Winans, William G. (*See* Swartz, John H., assignor.)					
195,320	Winchell, Alvin T., Albion, Mich. Heating apparatus	Sept. 18, 1877	592	173	12	499
194,494	Winchell, Harvey R., Montour, Iowa. Middlings-separator	Aug. 21, 1877	738	219	12	346
193,307	Winchell, Ira E., assignor of one-half interest to M. Feathers, Prairie City, Iowa. Hog catching and holding apparatus	July 17, 1877	779	239	12	133
7,926	Winchell, James F., assignor to P. P. Mast & Co., Springfield, Ohio. Seeding-machine. (Reissue)	Oct. 23, 1877	882	254	12	708
197,194	Winchell, James F., assignor to R. A. Scarff and A. C. Warner, Springfield, Ohio. Paper box	Nov. 13, 1877	481	143	12	838
	Winchester, Lucius A., *et al.* (*See* Wilcox, Edward M., assignor.)					
	Winchester Repeating Arms Company. (*See* Bennett, Thomas G., assignor.)					
	Winckhofer, George. (*See* Daul, Anthony, assignor.)					
192,609	Winebrener, Marshall H., Chicago, Ill. Ice-cutter	July 3, 1877	51	15	12	19
191,502	Wing, Daniel S., Rome, N. Y. Combined truck and bag-holder	May 29, 1877	1431	431	11	965
	Wing, Frank B. H., *et al.* (*See* Howig, Frank H., assignor.)					
187,442	Wing, Henry S., Rochester, N. Y. Button or stud	Feb. 13, 1877	526	162	11	285
	Wing, Theodore T. (*See* Tyler, Alfred C., assignor.)					
195,469	Winger, Hans H., Indianapolis, Ind., assignor to C. O. Hillstrom, Chicago, Ill. Reed-organ stop-action	Sept. 25, 1877	747	220	12	529
194,795	Winger, Henry, Marshallville, Ohio. Spring bed-bottom	Sept. 4, 1877	41	13	12	406
	Wingfield, Joseph S. (*See* Singleton & Wingfield.)					
187,337	Wing, Turner G., and J. H. Thompson, Ogden, Iowa. Fence-post	Feb. 13, 1877	422	132	11	271
194,023	Winkel, William, Pluckemin, N. J., assignor to Hopkins & Dickinson Manufacturing Company, New York, N. Y. Door-bell	Aug. 7, 1877	226	67	12	265
194,281	Winkler, Gustavus R., assignor of part interest to J. W. Hays, A. Niemeyer, H. Hinckley, and T. Hill, Williamsport, Pa. Rotary-disk steam-engine	Aug. 14, 1877	510	154, 155	12	309
196,732	Winkler, Gustavus R., Williamsport, Pa. Oscillating pump	Oct. 30, 1877	1097	319	12	750
197,709	Winkless, William, Newport, Ky. Fire-escape	Nov. 27, 1877	1047	314	12	935
194,065	Winn, Henry R., Detroit, Mich. Inking apparatus for printing-presses	Aug. 14, 1877	285	85	12	280
198,327	Winn, Ira, Falmouth, Me. Machine for removing bark from wood	Dec. 18, 1877	644	196	12	1055
191,789	Winn, Willis H., New York, N. Y. Gas and air carbureter	June 12, 1877	271	84	11	1018
192,399	Same.....same	June 26, 1877	941	282	11	1128
195,866	Winne, William I., Albany, N. Y. Fastening for box-covers, &c	Oct. 2, 1877	174	49	12	586
195,874	Same.....Box-fastener	Oct. 2, 1877	181	52	12	587
198,231	Winship, Gustavus L., Boston, Mass. Sight for fire-arms	Dec. 18, 1877	551	169	12	1041
	Winslow, Freeman. (*See* Rogers, Josiah W., assignor.)					
190,174	Winslow, Freeman, assignor to self, J. W. Rogers, and S. W. Winslow, Salem, Mass. Boot and shoe sole buffer	May 1, 1877	64	18	11	754
192,667	Winslow, George S., Cedar Rapids, Iowa. Fastening device for axle-box covers	July 3, 1877	124	34	12	29
193,741	Winslow, George S., Mount Vernon, Ill. Seal-bolt	July 31, 1877	1238	372	12	215
187,791	Winslow, Lorenzo, Rochester, N. Y. Straw-cutter	Feb. 27, 1877	892	278	11	349
193,839	Winslow, Sewell E., Augusta, Me. Holdback-iron	Aug. 7, 1877	41	13	12	240
	Winslow, Sidney W., *et al.* (*See* Winslow, Freeman, assignor.)					
190,175	Winslow, Willard, Lowville, N. Y. Car-axle	May 1, 1877	65	18	11	754
195,912	Winsor, John J., East Saginaw, Mich. Nut-lock	Oct. 9, 1877	232	66	12	602
7,897	Winsor, Joseph S., assignor to C. Moies, Providence, R. I. Gate.....(Reissue)	Sept. 25, 1877	958	286	12	560
188,559	Winsor, Joseph S., Providence, assignor to M. Fish, Valley Falls, R. I. Cigar-machine	Mar. 20, 1877	602	186, 187	11	477
196,963	Same.....Wire-drawing machine	Nov. 6, 1877	230	69, 70	12	792
193,435	Winston, Alexander, Fayette, Iowa. Car brake and starter	July 24, 1877	918	280	12	161
	Winter & Ball. (*See* Ball, Thomas W., assignor.)					
	Same.....(*See* Gigrich, Adam, assignor.)					
	Same.....(*See* Winter, Henry, assignor.)					
194,204	Winter, Carl E. G., assignor to self and J. G. Pfutzner, Port Jarvis, N. Y. Bottle-stopper	Aug. 14, 1877	434	132	12	299
195,684	Winter, Charles M., Kankakee, assignor to W. E. Geer, Chicago, Ill. Making oakum	Sept. 25, 1877	948	283	12	558
186,393	Winter, George, Jacksonville, Va. Combination-lock	Jan. 16, 1877	596	182	11	101
186,779	Winter, Henry, Jersey City, N. J. Wood-bending machine	Jan. 30, 1877	974	303	11	174, 175
192,887	Winter, Henry, assignor to Winter & Ball, Jersey City, N. Y. Lubricator	July 10, 1877	356	105	12	68
196,731	Winter, John, Syracuse, N. Y. Photographic chair	Oct. 30, 1877	1096	318	12	750
196,810	Winter, Wilhelm, Prague, Austria. Process of producing enlarged pictures upon fabrics	Oct. 23, 1877	867		12	706
192,210	Winterburn, Andrew, Albany, N. Y. Coal-oil lamp	June 19, 1877	715	219	11	1088
192,554	Winters, John G., Warren, Ohio. Lifting-jack	June 26, 1877	1089	329	11	1148
186,511	Winton, Albert, Hagerstown, Md. Steam-generator	Jan. 23, 1877	713	219	11	129
	Wirth, Christian. (*See* Tolle & Worth.)					

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
188,456	Wise, Andrew J., R. R., and E. J., Vaca Station, Cal. Combined harvester and thrasher	Mar. 13, 1877	501	155, 156	11	454
	Wise, Ebenezer J. (*See* Wise, Andrew J., R. R., and E. J.)					
	Wise, James L., *et al.* (*See* Matlock, John W., assignor.)					
	Wise, Morris. (*See* De Cordova, Wise & Darrell.)					
197,442	Wise, William E., Williamsport, Pa. Ice-cream freezer	Nov. 20, 1877	750	224	12	886
	Wise, Reuben R. (*See* Wise, Andrew J., R. R., and E. J.)					
191,503	Wiseman, Philip S., Toledo, Ohio. Grain-tally	May 29, 1877	1432	431	11	965
197,957	Wisner, Albert, Bridgeport, Conn. Fastening for attaching buttons to boots and shoes	Dec. 11, 1877	218	79	12	992
193,742	Wisner, George T., Florida, N. Y. Potato-bug-poison syringe	July 31, 1877	1239	372	12	215
	Wisner, James E. (*See* Cowles, Sidney) (Reissue.)					
	Same (*See* Shireman, Joseph H., assignor) (Reissue.)					
192,318	Wisner, James E., Friendship, N. Y. Horse hay-rake	June 19, 1877	842	255	11	1103
194,282	Same same	Aug. 14, 1877	514	156	12	309
197,808	Wiswell, Theodore L., assignor of two-thirds interest to G. F. Mead and A. W. Sylvester, Olathe, Kans. Combined buckle and hook	Dec. 4, 1877	101	31	12	960
195,867	Witherell, Elisha B., Medford, Mass. Attaching legs to chairs	Oct. 2, 1877	175	50	12	586
7,958	Witherell, Loren R., Davenport, Iowa, assignor to D. W. Sickels, Moline, Ill. Composition for lining and repairing stoves (Reissue)	Nov. 20, 1877	761	226	12	888
191,215	Witherell, Loren R., assignor of one-half interest to W. Downs, Davenport, Iowa. Sash-holder	May 22, 1877	1136	341	11	920
	Witherell, M. (*See* Bartlett, John W., assignor.)					
7,744	Witherell, Orin O., Lewiston, Me., assignor to L. M. and M. Rumsey, Saint Louis, Mo. Chain-pump valve (Reissue)	June 12, 1877	549	168	11	1053
192,475	Withers, Edward A., Marietta, Ga. Sorghum-mill	June 26, 1877	1003	302	11	1137
186,186	Withington, Charles B., Janesville, Wis., assignor to C. H. and L. J. McCormick, Chicago, Ill. Grain-binder	Jan. 9, 1877	368	113, 114	11	65
187,443	Same same	Feb. 13, 1877	527	162, 163	11	285
189,165	Same same	Apr. 3, 1877	130	47	11	577
196,775	Same same	Nov. 6, 1877	36	11	12	766
198,442	Same Wire-band cutting implement	Dec. 18, 1877	758	229	12	1071
189,293	Witsil, George L., Camden, assignor of one-half interest to A. F. Porter, Woodbury, N. J. Agitating and mixing apparatus	Apr. 3, 1877	267	87	11	593
192,319	Witt, John H., Columbus, Ohio. Stretcher-frame	June 19, 1877	843	255	11	1101
193,436	Witte, Lewis H., Cleveland, Ohio. Manufacture of milk-sugar	July 24, 1877	919		12	161
195,196	Wittböfft, Ludwig, Bochum, Germany. Converter for the manufacture of Bessemer-steel	Sept. 11, 1877	456	136	12	472
186,072	Wittmann, Hermann, Manitowoc, Wis. Car-coupling	Jan. 9, 1877	261	79	11	52
197,581	Witner, Isaac, New Holland, Pa. Book-support	Nov. 27, 1877	906	270	12	917
198,259	Woeber, Amos, Davenport, Iowa. Carriage-spring	Dec. 18, 1877	591	179	12	1046
197,710	Woerd, Charles V., assignor to American Watch Company, Waltham, Mass. Micrometer-regulator for watches	Nov. 27, 1877	1048	314	12	936
192,040	Wolbold, Henry, Philadelphia, Pa. Shedding mechanism for looms	June 12, 1877	545	162	11	1050
	Wolf, David C. (*See* Snider & Wolf.)					
197,533	Wolf, Frederick, Cincinnati, Ohio. Floor-packer	Nov. 27, 1877	859	255, 256	12	910
	Wolf, Frederick W. (*See* Junker & Wolf.)					
187,200	Wolf, Frederick, W., Chicago, Ill. Valve for brewers' vats and steep-tanks	Feb. 6, 1877	270	89	11	239
	Wolf, Henry L. R. (*See* Rogers & Wolf.)					
190,945	Wolf, Henry L. R. and O., assignors of one-third interest to J. W. A. Wolf, Dayton, Ohio. Paper box	May 15, 1877	857	254	11	873
195,685	Wolf, Henry L. R., assignor of one-half interest to J. W. A. Wolf, Dayton, Ohio. Paper-box	Sept. 25, 1877	948	283	12	558
194,634	Wolf, Jacob, Henderson, Minn. Rotary churn	Aug. 28, 1877	870	260	12	374
	Wolf, James W. (*See* Copland, Peter, assignor.)					
	Wolf, John W. A. (*See* Wolf, Henry L. R., assignor.)					
	Same (*See* Wolf, Henry L. R. and O., assignors.)					
	Wolf, Otto. (*See* Wolf, Henry L. R. and O.)					
186,780	Wolfe, Abner K., Prairie City, Mo. Wheel-plow carriage	Jan. 30, 1877	975	303	11	175
195,197	Wolfe, Israel, Goshen, Ind. Ironing-board	Sept. 11, 1877	457	136	12	472
	Wolfe, James W. (*See* Cady & Wolfe.)					
	Wolfendon, Shore & Co. (*See* Goodyear, Robert B., assignor.)					
190,108	Wolff, Charles A., Cincinnati, Ohio. Tuyere	Apr. 24, 1877	1151	350	11	732
190,660	Wolff, George S., Philadelphia, Pa. Leather-staining compound	May 8, 1877	567		11	828
194,754	Same Composition for staining or dying leather, &c	Aug. 28, 1877	989		12	3.0
197,195	Wolff, Herman G. E., Milwaukee, Wis. Tilting chair	Nov. 13, 1877	482	143	12	838
	Wolff, Julius. (*See* Sellman, Reesing & Wolff) (Reissue.)					
188,217	Wolff, Justus, Wyke, and R. Betley, Wigan, England. Making dyes from naphthaline	Mar. 6, 1877	256		11	413
189,533	Wolff, Justus, Wyke, near Bradford, and R. Betley, Wigan, England. Production of coloring matter from aniline	Apr. 10, 1877	525		11	635
	Wolff, L., *et al.* (*See* Foller, Albert, assignor) (Reissue.)					
187,793	Wolfinger, Francis R., Chicago, Ill. Ticket-case	Feb. 27, 1877	895	278	11	349
190,176	Wollensak, John F., Chicago, Ill. Transom-opener	May 1, 1877	66	18	117	54, 55
191,088	Same Skylight lifter and lock	May 22, 1877	1012	302	11	903
194,205	Same Transom-opener	Aug. 14, 1877	435	132	12	299
196,851	Same Transom-lifter	Nov. 6, 1877	116	35	12	777
189,537	Woltz, George W. J., Greenfield, Ohio. Fly-fan	Apr. 10, 1877	521	165	11	635
	Wolven, Joseph A. B. (*See* Varney, George A., assignor.)					
186,187	Wood, Abiel, Brooklyn, N. Y. Bung-seal	Jan. 9, 1877	373	114	11	66
	Wood, Allen L. (*See* Loeske, Louis, assignor.)					
	Same (*See* Paton, William H., assignor.)					
	Same (*See* Simmons, Samuel D., assignor.)					
190,994	Wood, Alonzo H., Toledo, Ohio. Lawn-mower attachment	May 22, 1877	926	274	11	890
	Wood, Amos L., trustee. (*See* Stevens, Edgar E., assignor.)					
	Wood, Charles. (*See* Fisher, Ezra E., assignor.)					
188,763	Wood, Charles, Middlesborough-on-Tees, England. Apparatus for treating furnace-slag or scoria	Mar. 27, 1877	812	249	11	514
	Wood, Charles D. (*See* Seaver, Augustus, assignor.)					
187,077	Wood, De Volson, Hoboken, N. J. Column for supporting rock-drilling machines	Feb. 6, 1877	152	51	11	223
191,791	Wood, Enos D., Utica, N. Y. Setting steam-generators	June 12, 1877	274	85	11	1018
193,629	Wood, George H., assignor of one-half interest to P. B. Sanborn, E. C. Carlton, and W. Stewart, Fort Huron, Mich. Pressure-regulator	July 31, 1877	1132	339	12	200

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
186,915	Wood, George T., San Francisco, Cal. Book-clamp	Jan. 30, 1877	1114	114	11	192
189,539	Wood, George W., assignor to M. M. Stanfield and H. W. Wood, New York, N. Y. Exercising-machine	Apr. 10, 1877	528	165	11	635
194,283	Wood, Henry, Montreal, Canada. Evaporating-pan	Aug. 14, 1877	515	156	12	309
187,211	Wood, Herman G., Sharon, Pa. Rotary engine	Feb. 6, 1877	271	89	11	239
	Wood, Hetty W., *et al.* (*See* Wood, George W., assignor.)					
186,970	Wood, Hiram D., Suncook, N. H. Loom	Feb. 6, 1877	55	19	11	209
	Wood, Isaac H. (*See* Allen, Freeman S., assignor.)					
	Wood, James A. (*See* Braislin & Wood.)					
193,679	Wood, James P., and J. W. Scull, assignors of one-third interest to H. Snyder, Philadelphia, Pa. Automatic tubular car-coupling	July 31, 1877	1187	355	12	207
187,693	Wood, John W., assignor of one-half interest to C. Schoen, Owatonna, Minn. Trotting-sulky	Feb. 20, 1877	770	239	11	324
186,394	Wood, John W., assignor to self and C. Schoen, Owatonna, Minn. Spring back for wagon-seats	Jan. 16, 1877	597	182	11	101
193,102	Wood, John W., Bonham, Tex. Plow	July 17, 1877	576	174	12	106
194,798	Wood, Joseph S., Brooklyn, N. Y. Apparatus for generating gas	Sept. 4, 1877	44	14	12	406
191,910	Wood, Joshua W., Loami, Ill. Apparatus for illuminating scale-beams	June 12, 1877	387	120	11	1032
188,457	Wood, Lewis G., and C. Maples, Hartwick, N. Y. Hop-frame	Mar. 13, 1877	503	156	11	454
192,805	Wood, Loftis, Brooklyn, N. Y. Street-car fare-box	July 3, 1877	250	73	12	46
195,738	Same.....Track-clearer for street-cars	Oct. 6, 1877	49	15	12	567
186,286	Wood, Merritt L., Valley Springs, Dak. Stove	Jan. 16, 1877	467	143	11	86
197,921	Same.....Mowing-machine	Dec. 4, 1877	217	67	12	977
194,206	Wood, Nathaniel B., and E. R. Fitch, Hubbardsville, N. Y. Platform-wagon	Aug. 14, 1877	435	132	12	299
7,655	Wood, Stephen W., Cornwall, N. Y. Machine for patching bullets.....(Reissue)	May 1, 1877	304	89	11	786
186,145	Same..... Revolving fire-arm	Jan. 23, 1877	659	202	11	122
193,792	Wood, Thomas H., Flushing, assignor to J. B. Brewster & Co., New York, N. Y. Side-bar wagon	July 31, 1877	1296	389	12	223
	Wood, Walter. (*See* Thacher, William, assignor.)					
191,393	Wood, Watson, Chelsea, Mass. Bench-plane	May 29, 1877	1305	396	11	951
	Wood, William. (*See* Woodbury & Wood.)					
187,575	Wood, William A., Albany, N. Y. Harvester-rake	Feb. 20, 1877	659	205	11	310
	Wood & Co., W. D. (*See* Morgan, Thomas R., assignor.)					
7,547	Wood, W. Dewees, Pittsburg, Pa. Furnace for finishing sheet-iron.....(Reissue)	Mar. 6, 1877	262	81	11	415
186,969	Same.....Process and composition for finishing sheet-iron	Feb. 6, 1877	54		11	209
195,068	Wood, William H., Port Rowan, Canada. Bell-piano	Sept. 11, 1877	322	98	12	452
	Wood, William M. (*See* Evans & Wood.)					
193,906	Wood, William M., jr., Washington, D. C. Fire-arm	Aug. 7, 1877	105	33, 34	12	249
189,826	Wood, William T., Mount Juliet, Tenn. Automatic lamp-extinguisher	Apr. 17, 1877	827	255	11	682
193,067	Woodard, Alonzo B., Hornellsville, N. Y. Hame-fastener	July 10, 1877	523	158	12	91
	Woodard, David. (*See* Goodwin & Woodard.)					
190,661	Woodard, Samuel A., Hornellsville, N. Y. Hame-fastening	May 8, 1877	568	169	11	828
	Woodbridge, L. Kellogg, *et al.* (*See* Wilcox, Percy & Daggett, assignors.)					
196,614	Woodburne, Henry, Ulverston, England. Revolving shutter	Oct. 30, 1877	978	285	12	735
188,273	Woodbury, Daniel A., Rochester, N. Y. Link for steam-engines	Mar. 13, 1877	315	100	11	428
191,790	Same.....Crank-shaft for steam-engines	June 12, 1877	273	84	11	1018
194,207	Same.....Cross-head for steam-engines	Aug. 14, 1877	436	132	12	300
194,796	Same.....Water-gage for steam-boilers	Sept. 4, 1877	41	13	12	406
198,481	Same.....Keying wheels to shafts	Dec. 25, 1877	811	246	12	1088
187,995	Woodbury, Edmund F., Rochester, N. Y. Machine for rolling whips	Mar. 6, 1877	39	10	11	386
190,109	Same.....Machine for sawing rattans	Apr. 24, 1877	1151	350, 351	11	733
194,117	Woodbury, Edward, Kalamazoo, Mich. Grain-binder	Aug. 14, 1877	357	106	12	288
	Woodbury, Edwin C. (*See* Woodbury & Cole.)					
	Same.....(*See* Woodbury, Oscar D. and E. C.)					
197,987	Woodbury, Henry W., and W. Wood, Keene, N. H. Water-engine	Dec. 11, 1877	288	86	12	996
190,265	Woodbury, Oscar D. and E. C., New York, and S. H. Cole, Brooklyn, N. Y.; said Woodburys assignors to said Cole. Wire-looping machine	May 1, 1877	149	43, 44	11	765
195,869	Woodbury, Oscar D. and E. C., New York, N. Y. Machine for boring brush-blocks	Oct. 2, 1877	176	50	12	586
192,776	Woodcock, Henry R., assignor of one-half interest to S. W. Soesbe, Greene, Iowa. Combined tug and pad loop for harness	June 26, 1877	1003	303	11	1137
189,982	Woodcock, Leonard M., assignor to Empire Wringer Company, Auburn, N. Y. Tool for making barbed-fence rails	Apr. 24, 1877	1004	307	11	714
189,828	Woodcock, William H., Williamsburg, N. Y. Damping-roller for lithographic printing	Apr. 17, 1877	828	256	11	282
189,829	Same.....Printing-press	Apr. 17, 1877	829	256, 257	11	682
187,444	Wooden, Lewis H., assignor of one-half interest to N. W. Brown, Hampstead, Md. Spittoon	Feb. 13, 1877	529	163	11	285
	Woodford, Charles W. (*See* Sandham, Frederick, assignor).....(Reissue.)					
7,956	Woodford, Charles W., Montreal, Canada, assignor to C. B. Beach, Cleveland, Ohio. Horseshoe-nail machine.....(Reissue)	Nov. 20, 1877	759	226	12	888
189,589	Woodford, Charles W., Montreal, Canada. Machine for finishing horseshoe-nails	Apr. 17, 1877	597	184	11	653
194,393	Woodford, Henry E., Montreal, Canada. Horseshoe-nail machine	Aug. 21, 1877	629	189, 190	12	332
	Woodford, Huldah. (*See* Gallup, Glen, assignor.)					
189,827	Woodford, Rollin S., Naugatuck, Conn. Apparatus for cementing rubber boots and shoes	Apr. 17, 1877	828	256	11	682
195,198	Woodgate, James H., Waveland, Ind. Revolving pulverizing-harrow	Sept. 11, 1877	458	136	12	473
195,429	Woodhull, Maxwell V., Washington, D. C. Copying-press	Sept. 18, 1877	695	206	12	514
	Woodin, Daniel. (*See* Hall, Chancy, assignor.)					
198,722	Woodley, James, Quebec, Canada. Shank-burnisher for boots and shoes	Dec. 25, 1877	1041	317	12	1121
186,968	Woodruff, Henry S., Janesville, Wis. Buckle	Feb. 6, 1877	54	19	11	209
194,755	Woodruff, Horace W., Cincinnati, Ohio. Railway-rail joint	Aug. 28, 1877	989	293	12	390
193,390	Woodruff, Isaac B., Winsted, Conn. Burglar-alarm	July 24, 1877	877	268	12	155
193,391	Same.....Alarm-clock	July 24, 1877	878	268	12	155
	Woodruff, William N. (*See* Johnson, M. Carlyle, assignor.)					
192,612	Woods, Columbus, assignor to J. A. Chestnut, Springfield, and A. M. Dubois, Carlinville, Ill. Corn-planter	July 3, 1877	58	17	12	20
194,394	Woods, Edward P., and G. D. Dudley, Lowell, Mass. Wire stand for books, cards, &c.	Aug. 21, 1877	631	190	12	332
191,741	Woods, Enoch, Englewood, Ill. Bag-holder	June 5, 1877	215	68	11	1006
	Woods, Frank. F. (*See* Graves, Nathaniel S., assignor.)					
190,698	Woods, George, Cambridgeport, Mass. Reed-organ action	May 15, 1877	622	185	11	843
187,955	Woods, George D., Aurora, Ill. Churn-dasher	Feb. 27, 1877	1053	325	11	371
192,041	Woods, Horace E., Rock Island, Ill. Steam-engine valve	June 12, 1877	526	162	11	1051

Alphabetical list of patentees for the year 1877—Continued.

No.	Name, residence, and invention.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
193,585	Woods, Horace E., Rock Island, Ill. Fire-box for locomotive-engines	July 24, 1877	1068	320	12	180
198,723	Woods, Joseph T., Toledo, Ohio. Fracture apparatus	Dec. 25, 1877	1042	317	12	1121
193,743	Woodside, Lewis S., assignor to self and M. S. Sober, Riverton, Iowa. Check-row attachment for corn-planters	July 31, 1877	1239	372	12	215
189,674	Woods, William, Brooklyn, N. Y. Ten-pin ball	Apr. 17, 1877	678	209	11	663
7,840	Woods, William L., Washington, D. C. Bill-file (Reissue)	Aug. 7, 1877	242	71	12	766
197,920	Woodward, Anderson, Mill Spring, Mo. Nut-lock	Dec. 4, 1877	216	66	12	976
190,400	Woodward, Arthur T., New York, N. Y. Burglar-proof safe	May 1, 1877	289	85	11	784
195,428	Woodward, David A., Baltimore, Md. Solar camera	Sept. 18, 1877	694	205	12	514
	Woodward, Erastus. (*See* Copeland, Woodward & Brock.)					
198,443	Woodward, Ferdinand, Sacramento, Cal. Clothes-clamp for bedsteads	Dec. 18, 1877	759	230	12	1072
186,656	Woodward, George W., New York, N. Y., and J. E. Jeffords, Philadelphia, Pa. Tea-steeping device	Jan. 23, 1877	854	264	11	148
193,585	Woodward, George W., Brooklyn, N. Y. Suspension-hook for chandeliers	July 24, 1877	1068	320	12	180
191,911	Woodward, John A., assignor of two-thirds interest to I. W. Gates and S. A. Sanderson, San Francisco, Cal. Endless-chain elevator	June 12, 1877	388	120, 121	11	1033
192,610	Same.....Coal-elevator	July 3, 1877	55	16	12	20
192,611	Woodward, John A., San Francisco, Cal. Grain-elevator	July 3, 1877	57	16	12	20
191,504	Woodward, Joseph, Bedall, England, machine for making bricks, tiles, &c., from slag or scoria	May 29, 1877	1433	432	11	965
195,868	Woodward, Robert H., New York, N. Y. Vaginal syringe	Oct. 2, 1877	176	50	12	586
196,733	Woodward, Theodore F., Winslow, N. J. Forming female screw-threads in glass-jars, insulators, &c	Oct. 30, 1877	1098	320	12	751
198,528	Woodward, Theodore F., assignor to Hay & Co., Winslow, N. J. Fruit-jar	Dec. 25, 1877	856	260	12	1094
	Woodworth, Levi P., *et al.* (*See* Petrie, Walter R., assignor.)					
	Woolcock, John, *et al.* (*See* Woolcock, William, assignor.)					
187,743	Woolcock, William, assignor of two-thirds interest to A. Atkinson and J. Woolcock, Newbury, N. Y. Heating and feeding air and steam to furnaces	Feb. 27, 1877	844	263	11	343
192,806	Woolfolk, Lucien B., Lexington, Ky. Refrigerator	July 3, 1877	251	73, 74	12	46
186,221	Woolley, Edward J., Pamrapo, N. J. Time-lock	Jan. 16, 1877	411	126	11	79
198,721	Same.....same	Dec. 25, 1877	1039	316	12	1121
197,443	Wooley, John L., Boulder, Colo. Pick	Nov. 20, 1877	751	224	12	887
188,218	Woolley, Leonidas G., Mendon, Mich. Swinging gate	Mar. 6, 1877	254	79	11	413
191,216	Woolman, Augustus C., Bellefountaine, Ohio. Latch for doors, &c	May 22, 1877	1137	342	11	920
193,630	Same.....Gate-latch	July 31, 1877	1133	340	12	200
188,274	Woolsey, George W., Toledo, Ohio. Filter	Mar. 13, 1877	316	100	11	428
194,284	Woolsey, John B., Bloomfield, Iowa. Sad-iron heater	Aug. 14, 1877	516	156	12	309
196,511	Woolson, Egbert, Springfield, Mass. Cloth-steaming apparatus	Oct. 23, 1877	868	250	12	706
	Woolverton, Cyras. (*See* Minor & Woolverton.)					
186,287	Woolverton, Samuel, Kenton, N. J. Tooth-brush	Jan. 16, 1877	467	144	11	86
	Wooster, Levi S. (*See* Blakeslee, Charles W., assignor) (Reissue.)					
192,725	Wootten, John E., Reading, Pa. Locomotive	July 3, 1877	168	48	12	36
193,437	Worcester, Edward J., and V. F. Prentice, Worcester, Mass. Machine for grinding mower and reaper knives	July 24, 1877	920	280	12	161
197,711	Worcester, Edward J., Worcester, Mass. Machine for grinding lawn-mower cutters	Nov. 27, 1877	1048	314	12	926
198,174	Worch, Emil, Washington, D. C. Game-board	Dec. 11, 1877	470	147	12	1022
192,299	Work, Alanson, Providence, R. I. Hose-jacket	June 19, 1877	715	219	11	1088
194,797	Same.....Magnetic ore-separator	Sept. 4, 1877	42	14	12	406
195,321	Worsley, Samuel L., Taunton, Mass. Nut-tapping machine	Sept. 18, 1877	592	174	12	499
197,070	Same.....Metal-screw-threading machine	Nov. 13, 1877	352	104, 105	12	819
192,140	Worswick, James R., and J. A. Prindle, Cleveland, Ohio. Steam-radiator	June 19, 1877	644	197	11	1078
	Worswick Manufacturing Company. (*See* Class, William F., assignor.)					
190,110	Worth, Samuel H., Memphis, Mo., assignor of one-half interest to A. Snyder. Check-rower and dropper	Apr. 24, 1877	1152	351	11	733
189,830	Worthen, William E., New York, N. Y. Pump-valve	Apr. 17, 1877	830	257	11	682
191,042	Same.....Steam pumping machinery	June 12, 1877	527	162	11	1051
192,400	Same.....Metal-clad ceiling	June 26, 1877	942	282	11	1129
193,308	Worthington, Amasa, Brooklyn, N. Y. Shoe-brush	July 17, 1877	780	239	12	133
	Worthington, George H., *et al.* (*See* Cameron, Alexander, assignor.)					
189,410	Worthington, Harry F., South River, N. J. Trunk, portmanteau, &c	Apr. 10, 1877	405	128	11	619
	Worthington, James M., *et al.* (*See* Cameron, Alexander, assignor.)					
	Woven Wire Mattress Company. (*See* Farnham, J. M., assignor) (Reissue)					
197,196	Wray, Cecil and L., jr., Ramsgate, England. Thermo-electric pile	Nov. 13, 1877	483	143, 144	12	838
187,338	Wray, James L., Rock Island, Ill. Compound for artificial stone	Feb. 13, 1877	422		11	272
	Wray, Leonard, jr. (*See* Wray, Cecil and L., jr.)					
185,998	Wrede, Theodore H., Covington, Ky. Leaching coal-ashes	Jan. 2, 1877	183		11	32
186,036	Wren, Oliver W., Brooklyn, N. Y. Culinary steamer	Mar. 6, 1877	84	24	11	391
	Wright, Albert W. (*See* Marlatt & Wright.)					
187,339	Wright, Alexander, Havana, Cuba. Water-elevator	Feb. 13, 1877	423	133	11	272
195,870	Wright, Allen T. Kokomo, Ind. Bee-hive	Oct. 2, 1877	178	51	12	586
190,401	Wright, Amos F., Cleveland, Ohio. Stove-pipe safe thimble	May 1, 1877	289	85	11	784
188,489	Wright, Augustus, Providence, R. I. Loom-shuttle	Mar. 20, 1877	542	167	11	468
197,236	Wright, Daniel, Lowell, Mass. Temple for looms	Nov. 20, 1877	542	160	12	854
	Wright, Edgar A. (*See* Lynch & Wright.)					
189,411	Wright, Enos, Denmark, Iowa. Riveting-hammer	Apr. 10, 1877	406	128	11	619
193,389	Wright, Erlman J., Waltham, Mass. Paper-clip	July 24, 1877	876	268	12	155
188,833	Wright, Edward, Worcester, Mass. Mechanism for operating doffer-combs	Mar. 27, 1877	892	272	11	525
191,792	Wright, Ezra P., assignor of one-half interest to J. V. Elster, Springfield, Ohio. Device for packing tables and other articles	June 12, 1877	274	85	11	1018
	Wright, George. (*See* Steinlein & Wright.)					
189,590	Wright, George, Chicago, Ill. Pan and basin	Apr. 17, 1877	599	185	11	653
198,175	Wright, Iven M., Litchfield, Ill. Bee-hive	Dec. 11, 1877	471	148	12	1022
189,412	Wright, James H., New York, N. Y. Dish-warmer	Apr. 10, 1877	407	128	11	620
192,958	Same.....same	July 10, 1877	420	126	12	78
188,560	Wright, John A., Keene, N. H. Oil-cabinet	Mar. 20, 1877	605	187	11	478
	Wright, John H. (*See* Lowe, Nathaniel M., assignor.)					
186,395	Wright, John T., and O. G. Bryant, Chicago, Ill.; said Wright assignor to said Bryant. Stencil-plate	Jan. 16, 1877	597	183	11	101
189,983	Wright, Joseph C., Cincinnati, Ohio. Pump	Apr. 24, 1877	1005	308	11	714
189,984	Wright, Joseph C., Philadelphia, Pa. Nut-lock	Apr. 24, 1877	1006	308	11	714
7,592	Wright, J. T., and M. Schneble, Dayton, Ohio. Piston-packing (Reissue)	Feb. 20, 1877	791	245	11	328

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No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
			Spec.	Dr'g.	Vol.	Page.
187,340	Wright, Lemuel W., Brooklyn, N. Y. Fire-shield for theaters, &c	Feb. 13, 1877	423	133	11	272
197,534	Wright, Lorenzo, Pawtucket, R. I. Ground-plate attachment for camera-obscuras	Nov. 27, 1877	861	256	12	911
	Wright, Luna. (*See* Miller & Wright) (Reissue.)					
194,208	Wright, Mitchell C., Chatham, Ohio. Sleigh-runner for wheeled vehicles	Aug. 14, 1877	437	133	12	300
196,734	Wright, Newton D., and C. C. Hill, Rockford, Ill. Match-safe	Oct. 30, 1877	1100	320	12	751
	Wright, Richard U. (*See* Lowerre, Thomas R., assignor.)					
	Wright, Samuel S., *et al.* (*See* Hendley, James W., assignor.)					
	Wright, Wilbur F. (*See* Farnsworth, Loring, assignor.)					
192,477	Wright, William A., Augusta, Ga., assignor of one-half interest to T. R. Porter and D. H. Gowing, Syracuse, N. Y. Bale-tie	June 26, 1877	1004	303	11	1138
193,587	Wright, William A., assignor to H. K. Wampole, Philadelphia, Pa. Drawer-pull	July 24, 1877	1069	320	12	180
187,445	Wright, William D., Baltimore, Md. Burglar-alarm	Feb. 13, 1877	530	163	11	285
194,944	Writner, George W., assignor of one-half interest to N. Du Brul, Cincinnati, Ohio. Manufacture of cigars	Sept. 4, 1877	189	58	12	426
	Wroath, John. (*See* Beauregard & Wroath.)					
188,717	Wroth, Alfred B., Winterset, Iowa. Device for hitching horses	Mar. 20, 1877	758	232	11	498
196,615	Wuerfel, Julia, Sheboygan, Wis. Dress-pattern chart	Oct. 30, 1877	980	285 286	12	735
	Wurfflein, William. (*See* Wallis, Thomas M., assignor.)					
191,630	Wuterich, William F., Meriden, Conn. Device for adjusting the position of clocks	June 5, 1877	110	34	11	991
	Wyatt, Thomas. (*See* Booth & Wyatt.)					
186,222	Wyckoff, George D., assignor to W. J. Rasin, Philadelphia, Pa. Treating ores	Jan. 16, 1877	412		11	79
193,744	Wyckoff, George D., Indianapolis, Ind., assignor to J. A. Green, Brooklyn, N. Y. Combined ruler and letter-scales	July 31, 1877	1240	372	12	215
187,694	Wyeth, David G., New Way, Ohio. Vehicle gearing	Feb. 20, 1877	771	240	11	324
190,946	Wyeth, Henry M., Richmond, Ind. Double acting ante-freezing force pump	May 15, 1877	858	254	11	871
	Wyman, Horace. (*See* Cromptou & Wymau.)					
193,309	Wyman, Horace, Worcester, Mass. Mechanism for shifting drop shuttle-boxes in looms	July 17, 1877	781	239	12	133
195,686	Same.....Shedding mechanism for looms	Sept. 25, 1877	949	383 384	12	558
197,754	Same.....Loom	Dec. 4, 1877	49	15 16 17	12	953
	Wynn, Andrew S. (*See* Mortimer, Joseph H., assignor.)					
191,742	Wynne, Katie A., East Boston, Mass. Finger-guard	June 5, 1877	216	68	11	1000
198,232	Wythe, William W., Erie, Pa. Reciprocating pencil-carrier for speed-recorders	Dec. 18, 1877	552	170	12	1041
198,233	Same.....Pneumatic railway speed-indicator	Dec. 18, 1877	553	170	12	1041
197,444	Yagn, Nicolas F., assignor of one-half interest to L. J. Surville, Moscow, Russia. Apparatus for measuring heights	Nov. 20, 1877	752	224	12	887
7,625	Yale, Linus, jr., deceased, S. N. Brooks, Chicago, Ill., administrator and assignor to Yale Lock Manufacturing Company, Stamford, Conn. Post-office box (Reissue)	Apr. 24, 1877	1139	352	11	734
	Yale Lock Manufacturing Company. (*See* Beidler, Jacob H., assignor) (Reissue.)					
	Same.....(*See* Bramble, William H., assignor) Reissue.)					
	Same.....(*See* Burge, John assignor.)					
	Same.....same (Reissue.)					
	Same.....(*See* Hermann & Taylor, assignors) (Reissue.)					
	Same.....(*See* Keating & Taylor, assignors.)					
	Same.....(*See* Schade, John, assignor.)					
	Same.....(*See* Stockwell, Emory, assignor.)					
	Same.....(*See* Taylor, Warren H., assignor.)					
	Same.....(*See* Towne & Stockwell, assignors.)					
	Same.....(*See* Towne, Henry R., assignor.)					
	Same.....(*See* Weston, Thomas A., assignor.)					
	Same.....(*See* Yale, Linus, jr.) (Reissue.)					
193,680	Yale, Richard H., New Orleans, La. Traction-wheel	July 31, 1877	1188	356	12	207
189,294	Yanda, Ferdinand C., Pittsburg, Pa. Master-key lock	Apr. 3, 1877	269	88	11	593
188,718	Yantis, Van Court, Rolla, Mo. Lever-clamp	Mar. 20, 1877	758	233	11	498
197,445	Yarborough, William H., Sherman, Tex. Earth-auger	Nov. 20, 1877	756	225	12	887
190,995	Yaryan, Homer T., Richmond, Ind. Bleaching beeswax	May 22, 1877	927		11	890
194,799	Same.....same	Sept. 4, 1877	45		12	406
193,681	Yates, Arthur P., Syracuse, N. Y. Door-spring	July 31, 1877	1190	356	12	207
	Yates, Henry. (*See* Yates & Kellett.)					
188,458	Yates, James, Rotherham, England. Manufacture of steel plates and blocks	Mar. 13, 1877	503		11	455
192,104	Yates, Samuel, Sedalia, Mo. Reciprocating churn	June 19, 1877	606	185	11	1074
186,396	Yates, Thomas E. and H., W. H. and S. Kellett, Cleckheaton, England. Machine for manufacturing cards for carding fibers	Jan. 16, 1877	598	183	11	101
189,591	Yeager, Charles H., Saint Louis County, Mo. Steam-trap	Apr. 17, 1877	599	185	11	653
	Yeakle, Michael M. (*See* Phillips, Zelora, assignor.)					
194,285	Yeakle, William, assignor to Hamilton Milling and Mill Furnishing Company, Hamilton, Ohio. Bran-duster	Aug. 14, 1877	517	156	12	309
197,922	Yeargin, George W., and T. L. Wells, Dyersburg, Tenn. Land-mold for plows	Dec. 4, 1877	218	67	12	977
192,726	Yerby, George W., New York, N. Y. Label for plug-tobacco and cigars	July 3, 1877	169	48	12	36
198,724	Yerby, George W., assignor to T. E. Allen, New York, N. Y. Label for cigars	Dec. 25, 1877	1043	318	12	1121
7,501	Yerington, Henry W., Oceanic, N. J., assignor to R. C. Anthony, New York, N. Y. Wire fastening for bottle-stoppers (Reissue)	Feb. 6, 1877	295	95	11	242
	Yetter, Andrew B., *et al.* (*See* Bancroft, John A., assignor) (Reissue.)					
	Yetter, Andrew B. (*See* Bancroft, Lorey F., assignor) (Reissue.)					
190,530	Yocco, Clemente, San José, Cal. Spectacles	May 8, 1877	431	126	11	811
196,280	Yoch, Benhard, West Belleville, Ill. Traction-wheel	Oct. 16, 1877	626	180	12	664
189,006	Yon, George, Montreal, Canada. Ventilator	Mar. 27, 1877	1057	325	11	547
196,735	Yost, Irvin, Thornville, Ohio. Gate	Oct. 30, 1877	1101	320	12	751
	Youkers, Jacob. (*See* Wanner & Youkers.)					
192,808	Young, Albert A., Boston, Mass. Street-car	July 3, 1877	253	74	12	46
196,281	Young, Alexander, Chicago, Ill. Chimney-attachment for heaters	Oct. 16, 1877	627	181	12	664
196,852	Young, Alonzo E., Boston, Mass. Attaching shanks to door-knobs	Nov. 6, 1877	117	35	12	777
7,712	Young, Barker C., Boston, Mass. Buckle (Reissue)	May 29, 1877	1452	437	11	967
191,756	Same.....Last-block fastener	Aug. 28, 1877	990	294	12	390
188,459	Young, Charles M., Meadville, Pa. Harvester	Mar. 13, 1877	504	156	11	455
190,177	Young, Edward L., Norfolk, Va. Steering apparatus	May 1, 1877	66	18	11	755
194,209	Young, Francis H., and J. S. Sheldon, Stanhope, N. J., assignors to said Sheldon. Ironing-board	Aug. 14, 1877	437	133	12	300
194,856	Young, Francis M., Chicago, Ill. Condenser for fractional distillation	Sept. 4, 1877	100	32	12	414

Alphabetical list of patentees for the year 1877—Continued

No.	Name, residence, and invention.	Date.	Monthly volume.		Official Gazette.	
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197,535	Young, George M., Montgomery, N. J. Car-coupling	Nov. 27, 1877	862	256	12	911
187,794	Young, George S., Concord, N. H. Stall-floor	Feb. 27, 1877	896	279	11	349
188,561	Young, Harlan P., and F. Calvert, Lowell, Mass. Plaiting-board	Mar. 20, 1877	606	188	11	478
188,719	Young, Henry, jr., Woburn, assignor to self, C. B. Bryant, Stoneham, and Theophilus King, jr., Quincy, Mass. Smoke-consuming furnace	Mar. 20, 1877	759	233	11	498
193,745	Young, James Cambridge, Mass. Insect-guard	July 31, 1877	1241	373	12	216
	Young, James B., *et al.* (*See* Seaman, Joseph S., assignor.)					
198,234	Young, James E., Lynn, Mass. Edge-trimmer for boots and shoes	Dec. 18, 1877	553	170	12	1041
188,219	Young, James W., Southfield, Mich. Paris-green duster	Mar. 6, 1877	255	79	11	413
189,007	Young, John, Amsterdam, N. Y. Cork-fastening bottle-neck	Mar. 27, 1877	1057	325	11	547
191,274	Same.....Clothes-wringer	May 29, 1877	1208	362	11	937
194,981	Young, John, Amsterdam, assignor to C. M. Ball, Watervliet, N. Y. Clothes-wringer	Sept. 11, 1877	237	72	12	440
198,529	Young, John, Chicago, Ill. Electric burglar-alarm	Dec. 25, 1877	856	261	12	1094
187,576	Young, McClintock, Frederick, Md. Machine for making match-sticks	Feb. 20, 1877	661	206	11	310
194,319	Same.....Machine for cutting and sticking match-sticks	Aug. 21, 1877	564	169	12	323
196,853	Same.....Tube-machine	Nov. 6, 1877	117	35, 36	12	777
	Young, Peter T. (*See* Syme, Chapman J., assignor.)					
	Young, Samuel M. (*See* Mears, Ephraim, assignor.)					
	Young, Silas B. (*See* Walker, William V., assignor.)					
186,916	Young, Solomon W., Providence, R. I. Eyelet	Jan. 30, 1877	1115	115	11	192
192,613	Young, Solomon W., assignor to Homogeneous Metal Manufacturing Company, Providence, R. I. Button	July 3, 1877	59	17	12	20
189,005	Young, Thomas J., assignor to H. Bower, Philadelphia, Pa. Machine for making pills, lozenges, &c.	Mar. 27, 1877	1056	325	11	547
195,069	Young, Thomas P., Lynn, Mass. Sole-edge setting and burnishing machine for boots and shoes	Sept. 11, 1877	323	98	12	452
190,111	Young, Thomas S., New York, assignor to E. A. Nichols, Yonkers, N. Y. Indicator for elevators	Apr. 24, 1877	1154	351	11	733
	Young, William. (*See* Aitken & Young.)					
192,401	Young, William B., assignor to self, G. Board, and F. E. Everett, Golden, Colo. Separating copper and the precious metals from copper matte	June 26, 1877	943		11	1129
197,589	Young, William R., Healdsburg, Cal. Combination-padlock	Nov. 27, 1877	906	270	12	917
192,105	Youngs, Quinton M., Utica, N. Y. Toe-weight attachment	June 19, 1877	607	185	11	1071
187,744	Yourtee, Samuel L., Cincinnati, Ohio. Shelf attachment for stoves	Feb. 27, 1877	845	263	11	343
	Yourtree, Samuel L. (*See* Nelon, Michael D., assignor.)					
	Yundt, J. H. (*See* Parsons, John S., assignor.)					
	Yvelin, Cordelia E. (*See* Sulzbacher & Yvelin.)					
192,807	Yvelin, Cordelia E., New York, N. Y. Wash-basin	July 3, 1877	253	74	12	46
186,397	Zachariae, Edward, Vienna, Austria. Piano-forte attachment	Jan. 16, 1877	598	183, 184	11	101
191,394	Zacharias, Marcus, San Francisco, Cal. Stud-fastening	May 29, 1877	1306	396	11	951
186,512	Zahringer, Eugen, Pittsburg, Pa. Registering device for bottles	Jan. 23, 1877	714	219	11	129
194,945	Same.....Combined refrigerator, bottle-cooler, and water-cooler	Sept. 4, 1877	189	58	12	426
	Zane, Joseph. (*See* Roach, Francis, assignor) (Reissue.)					
190,178	Zane, Joseph, assignor of one-half interest to F. Roach, Boston, Mass. Water closet	May 1, 1877	68	19	11	755
	Zanini, Pietro P. G. B. (*See* Pasquale & Zanini.)					
187,500	Zay, Frederic B., and J. Dennison, Findlay, Ohio. Vehicle-spring	Feb. 20, 1877	597	185	11	301
194,946	Zeigler, Daniel, Lewistown, Pa. Car-coupling	Sept. 4, 1877	190	58	12	426
190,996	Zellers, Mahlon M., Kent, Ohio. Shutter-worker	May 22, 1877	927	274	11	820
194,210	Zeroni, Max, Witten, Germany. Percussion-fuse for projectiles	Aug. 14, 1877	458	133	12	300
196,736	Ziegler, George P., York, Pa. Kitchen-cabinet	Oct. 30, 1877	1102	320, 321	12	751
	Ziegler, John Q. A. (*See* Adams, Henry W., assignor.)					
189,413	Ziegler, John Q. A., assignor of one-half interest to H. W. Adams, Philadelphia, Pa. Composition for artificial fuel	Apr. 10, 1877	407		11	620
	Ziegler, J. Q. A. (*See* Blanc, Joseph, assignor.)					
195,242	Zieseniss, Frank, Philadelphia, Pa. Door-spring	Sept. 18, 1877	521	152	12	489
194,947	Zimmer, George, Williamsport, Pa. Wood-polisher	Sept. 4, 1877	191	59	12	426
	Zimmerman, Charles P. (*See* Brown & Sanborn, assignors.)					
191,793	Zimmerman, George, and G. Beatty, Steubenville, Ohio. Glass-tool	June 12, 1877	275	85	11	1018
189,831	Zimmerman, Jasper, Brunswick, Mo. Clamp for making frames	Apr. 17, 1877	831	257	11	683
191,043	Zimmerman, John, Mansfield, Ohio. Fruit-drier	June 12, 1877	529	162	11	1051
192,727	Zimmerman, John F., Crestline, Ohio. Window-bracket	July 3, 1877	169	40	12	36
196,282	Zimmerman, John P., assignor of one-half interest to H. W. Feutz, Bellefonte, Pa. Car-starter	Oct. 16, 1877	628	181	12	664
189,008	Zimmerman, Martin, Mohican Township, Ohio. Corn-marker	Mar. 27, 1877	1058	326	11	547
190,947	Zimmerman, Nathan, Granville, Pa. Bee-hive	May 15, 1877	859	255	11	874
188,220	Zimmerman, William H., Chestertown, Md. Electric lighting apparatus for lamps	Mar. 6, 1877	255	80	11	413
189,540	Zink, Jacob B., Union City, Mich. Car-coupling	Apr. 10, 1877	528	165	11	636
191,557	Zinn, William H., Boston, Mass. Portable fountain	June 5, 1877	47	14	11	982
195,687	Same.....Watch-winding device	Sept. 25, 1877	951	284	12	559
	Zint, George W. (*See* Cassell & Zint.)					
186,781	Zistel, Louis, Sandusky, Ohio. Ice-elevator	Jan. 30, 1877	975	303	11	175
191,505	Zoellner, Isaac, Chicago, Ill. Pantaloons	May 29, 1877	1434	432	11	965
192,478	Zogbaum, Ferdinand, New York, N. Y. Accordion	June 26, 1877	1005	303	11	1138
191,506	Zoller, Albert, Hoboken, N. J. Barrel-washer	May 29, 1877	1434	432	11	965
	Zook, A. S., *et al.* (*See* Devor, James R., assignor.)					
	Zook, Daniel, *et al.* (*See* Devor, James R., assignor.)					
187,212	Zottman, Henry, Eureka, Nev. Slag-pot	Feb. 6, 1877	273	89	11	239
7,461	Zottman, John H., Vergennes, Vt., assignor of one-half interest to W. S. Hopkins. Die for trimming the points of horseshoe-nails (Reissue)	Jan. 9, 1877	379	116	11	66
195,430	Zuckschwerdt, George, New York, N. Y. Toy money-box	Sept. 18, 1877	697	206	12	514
188,720	Zuenkeler, Ferdinand, Cincinnati, Ohio. Manufacturing of boxes	Mar. 20, 1877	760	233	11	498
195,871	Same.....Wooden box	Oct. 2, 1877	179	51	12	586
197,508	Zug, Christopher, Pittsburg, Pa. Apparatus for annealing	Nov. 27, 1877	832	248	12	906
	Zugelder, Fredrick G. (*See* Schaffer, John T., assignor.)					
	Zweidinger, John C. (*See* Buettler & Zweidinger.)					
187,446	Zwietusch, Otto, Milwaukee, Wis. Soda-water apparatus	Feb. 13, 1877	531	164	11	285
191,912	Same.....Carbonic-acid-gas generator	June 12, 1877	389	121	11	1033

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

No.	Name, residence, and design.	Date.	Official Gazette. Vol.	Page.
9,712	Adler, Max, assignor to J. Strouse & Co., New Haven, Conn. Corset	Jan. 23, 1877	11	113
9,713	Same.....same	Jan. 23, 1877	11	113
9,719	Adler, Max, assignor to Mayer, Strouse & Co., New Haven, Conn. Corset	Jan. 30, 1877	11	154
9,873	Same.....same	Apr. 3, 1877	11	554
9,902	Same.....Corset-clasp eye	Apr. 17, 1877	11	642
9,970	Alfred, Almon S., Brooklyn, N. Y. Ornamenting writing-paper, cards and envelopes	May 8, 1877	11	790
10,009	Allen, Frank E., Yonkers, N. Y., assignor to Roxbury Carpet Company, Boston, Mass. Carpet	May 29, 1877	11	926
10,263	Same.....same	Oct. 2, 1877	12	5
9,971	Atwood, Lewis J., assignor to Plume & Atwood Manufacturing Company, Waterbury, Conn. Shade-ring	May 15, 1877	11	833
	Bacon & Co., J. T. (*See* Heckmann, Karl F., assignor.)			
10,079	Baker, Robert C., Philadelphia, Pa. Pendent gas-fixture	July 3, 1877	12	7
10,080	Same.....Gasalier	July 3, 1877	12	7
10,081	Same.....same	July 3, 1877	12	7
	Bakewell, Pears & Co. (*See* Pears, Harry P., assignor.)			
9,848	Barker, David, assignor to Crystal Glass Company, Pittsburg, Pa. Glassware	Mar. 13, 1877	11	421
10,063	Barmore, Charles, Cincinnati, Ohio. Casket-handle lug	June 26, 1877	11	1114
10,380	Barney, Everett J., Springfield, Mass. Skates	Dec. 25, 1877	12	1078
10,233	Bartlett, Charles H., Cambridge, Mass. Hassock-covering	Sept. 11, 1877	12	432
9,745	Baye, Alphonse, London, England, assignor to Roxbury Carpet Company, Boston, Mass. Carpet	Feb. 20, 1877	11	291
9,874	Same.....same	Apr. 3, 1877	11	554
9,875	Same.....same	Apr. 3, 1877	11	554
9,876	Same.....same	Apr. 3, 1877	11	554
9,903	Same.....same	Apr. 17, 1877	11	642
10,095	Baye, Alphonse, Paris, France, assignor to Roxbury Carpet Company, Boston, Mass. Carpet	July 17, 1877	12	95
9,700	Beam, Daniel A., Newark, N. J., assignor to Wheeler, Parsons & Hayes, New York, N. Y. Ornamental cham	Jan. 16, 1877	11	70
9,701	Same.....same	Jan. 16, 1877	11	70
9,917	Beck, George, Highland, N. Y. Bas-relief	Apr. 17, 1877		642
10,144	Becker, John, assignor to D. Estes and C. E. Lauriat, Boston, Mass. Book-cover	Aug. 7, 1877	12	229
9,729	Beesley, Jacob, assignor to D Stuart, R. Peterson & Co., Philadelphia, Pa. Cooking-range	Feb. 6, 1877	11	198
	Best & Co., Albert. (*See* Knehborth, Philip P., assignor.)			
	Best & Co., Albert. (*See* Knehborth, assignor).			
9,730	Bevin, Abner A., East Hampton, Conn. Sleigh-bell	Feb. 6, 1877	11	198
	Bigelow Carpet Company. (*See* Campbell, John, assignor.)			
	Same.....(*See* Neil, John, assignor.)			
9,731	Bill, Nathan D., Springfield, Mass. Paper box	Feb. 6, 1877	11	198
9,739	Same.....same	Feb. 13, 1877	11	291
9,859	Bingham, John H., Hartford, Conn. Pack of playing-cards	Mar. 20, 1877	11	460
9,919	Blan, Max, New York, N. Y. Dress-fringe	Apr. 24, 1877	11	690
	Blunt, W. S. (*See* Heinigke, Otto, assignor.)			
9,860	Bodine, Francis L., Philadelphia, Pa., assignor to Cohansey Glass Manufacturing Company, Bridgeton, N. J. Glass jar	Mar. 20, 1877	11	460
9,877	Boote, Edward, New York, N. Y. Dishes	Apr. 3, 1877	11	554
	Booth & Co., George. (*See* Markoe, Fredrick, assignor.)			
9,892	Bosworth, Frederick S., assignor to Weybosset Mills, Providence, R. I. Fancy cassimere	Apr. 10, 1877	11	601
10,010	Same.....same	May 29, 1877	11	926
10,011	Same.....same	May 29, 1877	11	926
10,082	Same.....Cassimere	July 3, 1877	12	7
10,324	Same.....Fancy cassimere	Nov. 27, 1877	12	891
10,346	Same.....same	Dec. 11, 1877	12	982
10,131	Bowen, David D., Adams, Mass. Cassimere	July 31, 1877	12	190
	Bradley & Hubbard Manufacturing Company. (*See* Kintz, Peter, assignor.)			
10,258	Brambach, Stephan, assignor to Simpson & Co., New York, N. Y. Upright-piano case	Sept. 25, 1877	12	519
10,249	Brayer, Nicholas, assignor to Equitable Co-operative Foundry Company, Rochester, N. Y. Parlor wood-stoves	Sept. 11, 1877	12	432
10,291	Brehmer, Henry, Stapleton, assignor to D. W. Bruce, New York, N. Y. Font of ornamental printing-types	Nov. 6, 1877	12	759
	Brewster Bros. & Co. (*See* Gilbert, Thomas S., assignor.)			
	Brittin, Edwin L. (*See* Gill & Brittin.)			
	Bromley & Sons, John. (*See* Bromley, John H., assignor.)			
	Bromley, George D., *et al.* (*See* Kerr, Hugh S., assignor.)			
	Bromley, James, *et al.* (*See* Kerr, Hugh S., assignor.)			
9,893	Bromley, John H., assignor to J. Bromley & Sons, Philadelphia, Pa. Carpet	Apr. 10, 1877	11	601
10,132	Same.....same	July 31, 1877	12	190
	Bromley, Thomas, *et al.* (*See* Kerr, Hugh S., assignor.)			
9,858	Brookfield, James M., Brooklyn, N. Y. Telegraph-insulator	Mar. 20, 1877	11	460
9,956	Same.....same	May 8, 1877	11	790
10,278	Brower, Bloomfield, New York, N. Y. Inkstand base	Oct. 16, 1877	12	627
	Brown, Henry. (*See* Smith & Brown.)			
	Bruce, David W. (*See* Brehmer, Henry, assignor.)			
	Same.....(*See* Herritt, Julius, assignor.)			
9,857	Bruce, David W., New York, N. Y. Font of printing-type	Mar. 20, 1877	11	460
10,290	Same.....Font of ornamental printing-type	Nov. 6, 1877	12	757
10,088	Buchanan, Alonzo M., Moberly, Mo. Monument	July 3, 1877	12	8
10,234	Burgess, John W., New York, N. Y. Handle for dishes	Sept. 11, 1877	12	432
10,325	Burgess, John W., Orange, N. J. Dish-handle	Nov. 27, 1877	12	891
9,972	Burns, George C., Burrillville, R. I. Cassimere	May 15, 1877	11	833
9,973	Burr, Russell H., assignor to C. Rogers & Bro., West Meriden, Conn. Coffin-handle oar	May 15, 1877	11	833
9,974	Same.....same	May 15, 1877	11	833
10,245	Cairns, Edward, Morristown, N. J. Speaking-trumpet	Sept. 11, 1877	12	432
10,012	Campbell, John, London, England, assignor to Bigelow Carpet Company, Clinton, Mass. Carpet	May 29, 1877	11	926
10,363	Campbell, John, London, England, assignor to Alexander Smith & Sons Carpet Company, Yonkers, N. Y. Carpet	Dec. 25, 1877	12	1078
10,364	Same.....same	Dec. 25, 1877	12	1078

Alphabetical list of patentees of designs for the year 1877—Continued.

No.	Name, residence, and design.	Date.	Official Gazette. Vol.	Page
10,365	Campbell, John, London, England, assignor to Alexander Smith & Sons Carpet Company, Yonkers, N. Y. Carpet	Dec. 25, 1877	12	1078
10,366	Same.....same	Dec. 25, 1877	12	1078
10,367	Same.....same	Dec. 25, 1877	12	1078
	Candee & Co., L. (*See* Hubbard, Alexander S., assignor.)			
9,992	Capitain, William F., assignor to Marder, Luse & Co., Chicago, Ill. Font of printing-type	May 22, 1877	11	880
10,055	Carlewitz, August, Newark, N. J. Center-piece	June 19, 1877	11	1062
10,286	Carmichel, Alexander, Westerly, R. I. Cassimere	Oct. 30, 1877	12	717
10,287	Same.....same	Oct. 30, 1877	12	717
10,259	Careo, Albert H., Ranenthal, Prussia. Buttons	Sept. 25, 1877	12	519
10,013	Carpenter, Francis, Glendale, R. I. Fancy cassimere	May 29, 1877	11	926
9,849	Castle, Chauncey H., Quincy, Ill. Stove	Mar. 13, 1877	11	421
9,718	Cate, Elijah G., assignor to La Belle Glass Company, Bridgeport, Ohio. Inkstand	Jan. 23, 1877	11	113
10,069	Chase, Oscar F., Thompson, Conn. Cassimere	June 26, 1877	11	1114
10,089	Same.....same	July 3, 1877	12	8
10,091	Same.....same	July 10, 1877	12	54
10,326	Same.....same	Nov. 27, 1877	12	891
10,270	Clark, Augustus, Amsterdam, N. Y. Burial casket	Oct. 9, 1877	12	36
10,250	Clay, Virginius C., Brooklyn, N. Y. Playing-card	Sept. 18, 1877	12	478
	Cleveland, Orestes. (*See* Helton, Francis H., assignor.)			
	Cline, David. (*See* Raup, Daniel, assignor.)			
10,282	Cobb, Jonathan D., London, England. Pencil-case	Oct. 23, 1877	12	669
10,047	Coggeshall, Oliver P., Providence, R. I. Button or stud	June 12, 1877	11	1012
	Cohansey Glass Manufacturing Company. (*See* Bodine, Francis L., assignor.)			
	Colladay, C. D., *et al.* (*See* Hensel, George S., assignor.)			
	Colladay, S. B., *et al.* (*See* Hensel, George S., assignor.)			
	Collier, George B. (*See* Schuckers, Jacob W., assignor.)			
	Collins, John. (*See* Tiemann, Simpson & Collins.)			
9,878	Conner, James M., Greenville, N. J. Font of printing-type	Apr. 3, 1877	11	554
	Conrad, William C. (*See* Jarrett, Conrad & Renz.)			
9,686	Conradt, Augustus, assignor to Middletown Plate Company, Middletown, Conn. Salver	Jan. 2, 1877	11	5
	Corbin, F., *et al.* (*See* Fracker & Widmayer, assignors.)			
	Same.....(*See* Widmayer, Louis, assignor.)			
	Corbin, P., *et al.* (*See* Fracker & Widmayer, assignors.)			
	Same.....(*See* Widmayer, Louis, assignor.)			
9,866	Corse, Augustus P., Troy, N. Y. Cooking-stove	Mar. 27, 1877	11	704
10,310	Crawford, Joseph, New York, N. Y. Mirror-frame	Nov. 13, 1877	12	798
	Crease, Orlando, *et al.* (*See* Heald, Alfred, assignor.)			
9,754	Crisand, Emil, assignor to H. St. John, New Haven, Conn. Embroidery-pattern	Feb. 20, 1877	11	291
9,755	Same.....same	Feb. 20, 1877	11	291
9,756	Same.....same	Feb. 20, 1877	11	291
10,030	Same.....same	June 5, 1877	11	973
10,031	Same.....same	June 5, 1877	11	973
10,032	Same.....same	June 5, 1877	11	973
10,083	Same.....same	July 3, 1877	12	8
10,138	Same.....same	Aug. 7, 1877	12	239
10,236	Same.....same	Sept. 11, 1877	12	432
10,237	Same.....same	Sept. 11, 1877	12	432
10,255	Same.....same	Sept. 18, 1877	12	478
	Crystal Glass Company. (*See* Barker, David, assignor.)			
9,862	Cullinan, Paul J., New York, N. Y. Head-comb	Mar. 20, 1877	11	460
9,758	Culter, Richard A., and D. C. Proctor, Peoria, Ill. Cooking-stove	Feb. 20, 1877	11	291
9,879	Same.....Heating-stove	Apr. 3, 1877	11	554
10,133	Same.....same	July 31, 1877	12	190
9,850	Culver, John M., assignor to Hall, Elton & Co., Wallingford, Conn. Spoon, fork, &c	Mar. 13, 1877	11	421
9,861	Same.....Handle of spoons and forks	Mar. 20, 1877	11	460
10,063	Cussen, William J., Richmond, Va. Tobacco-bag	June 19, 1877	11	1063
10,070	Same.....same	June 26, 1877	11	1114
9,851	Daniel, Eugéne, Paris, France, assignor to Roxbury Carpet Company, Boston, Mass. Carpet	Mar. 13, 1877	11	421
9,852	Same.....same	Mar. 13, 1877	11	421
9,880	Same.....same	Apr. 3, 1877	11	554
9,920	Same.....same	Apr. 24, 1877	11	690
9,921	Same.....same	Apr. 24, 1877	11	690
9,957	Same.....same	May 8, 1877	11	790
10,071	Same.....same	June 26, 1877	11	1114
10,285	Same.....same	Oct. 23, 1877	12	669
10,315	Daniel, Eugéne, Paris, France, assignor to A. Smith & Sons Carpet Company, Yonkers, N. Y. Carpet	Nov. 20, 1877	12	843
9,993	Davis, Henry J., Brooklyn, N. Y. Clock and mirror-frame	May 22, 1877	11	880
	Davis, Edward P., *et al.* (*See* Heckmann, Louis, assignor.)			
10,014	Davis, Leonard L., Springfield, Mass. Spirit-level	May 29, 1877	11	926
10,015	Same.....same	May 29, 1877	11	926
10,016	Same.....same	May 29, 1877	11	926
10,017	Same.....same	May 29, 1877	11	926
9,770	Davis, Percy L., San Francisco, Cal. Combined match-holder and friction-mat	Mar. 6, 1877	11	376
	Deacon, William H. (*See* Hill & Deacon.)			
9,720	De Hart, William, assignor to S. Sanford, Amsterdam, N. Y. Carpet	Jan. 30, 1877	11	154
9,721	Same.....same	Jan. 30, 1877	11	154
9,722	Same.....same	Jan. 30, 1877	11	154
10,169	Same.....same	Aug. 28, 1877	12	354
10,170	Same.....same	Aug. 28, 1877	12	354
10,018	Demuth, William, New York, N. Y. Cigar-pipe	May 29, 1877	11	926
	Detroit Stove Works. (*See* Dwyer, William, assignor.)			
9,746	Dickinson, Charles B., Brooklyn, N. Y. India-rubber eraser	Feb. 20, 1877	11	291
9,904	Diehl, Peter, New York, N. Y. Chair	Apr. 17, 1877	11	642
10,251	Dithridge, Edward D., Pittsburg, Pa. Combined chimney and globe	Sept. 8, 1877	12	478
10,338	Debelmann, John B., Brooklyn, N. Y., assignor to Hart, Bliven & Mead Manufacturing Company, Kensington, Conn. Inkstand	Dec. 11, 1877	12	981
10,048	Donlevy, Alice, New York, N. Y., assignor to H. St. John, New Haven, Conn. Embroidery pattern.	June 12, 1877	11	1012
	Dougherty, Andrew. (*See* Manning, Alfred J., assignor.)			
9,975	Dresser, Christopher, London, England, assignor to Wilson & Fenimores, Philadelphia, Pa. Wall-paper	May 15, 1877	11	834
9,976	Same.....same	May 15, 1877	11	834
9,977	Same.....same	May 15, 1877	11	834

Alphabetical list of patentees of designs for the year 1877—Continued.

No.	Name, residence, and design.	Date.	Official Gazette. Vol.	Page.
9,978	Dresser, Christopher, London, England, assignor to Wilson & Fenimores, Philadelphia, Pa. Wall-paper	May 15, 1877	11	834
9,979	Same.....same	May 15, 1877	11	834
9,980	Same.....same	May 15, 1877	11	834
9,981	Same.....same	May 15, 1877	11	834
9,982	Same.....same	May 15, 1877	11	834
9,983	Same.....same	May 15, 1877	11	834
9,984	Same.....same	May 15, 1877	11	834
9,985	Same.....same	May 15, 1877	11	834
9,986	Same.....same	May 15, 1877	11	834
9,987	Same.....same	May 15, 1877	11	834
	Dreyfues & Sachs. (*See* Hamilton, William, assignor.)			
9,740	Dreyfuse, Bernard, and S. Sachs, New York, N. Y. Embroidery pattern-sheet	Feb. 13, 1877	11	291
	Dreyfuss, B., *et al.* (*See* Hamilton, William, assignor.)			
10,145	Dunworth, Frank, J. H. Young, and J. A. Dunworth, New York, N. Y. Frame for sugar-bowls	Aug. 7, 1877	12	229
	Dunworth, James A. (*See* Dunworth, Young & Dunworth.)			
10,139	Dwyer, James, assignor to Detroit Stove Works, Detroit, Mich. Stove	Aug. 7, 1877	12	229
	Equitable Co-operative Foundry Company. (*See* Brayer, Nicholas, assignor.)			
	Estes, Dana, *et al.* (*See* Becker, John, assignor.)			
	Estey & Co., J. (*See* Hayward, Samuel, assignor.)			
	Faber, Eberhard. (*See* Schrag, Philip, assignor.)			
	Falconer & Carrol. (*See* Hamer, John, assignor.)			
10,327	Fallows, James, Philadelphia, Pa. Toy money-box	Nov. 27, 1877	12	891
	Farr, Lincoln D. (*See* Huthison, James, assignor.)			
9,905	Fenton, James, Birmingham, England, assignor to J. Thornton & Co., New York, N. Y. Card of buttons	Apr. 17, 1877	11	642
9,906	Same.....same	Apr. 17, 1877	11	642
10,309	Fish, Leander E., assignor of one-half interest to J. L. Ryman, Cincinnati, Ohio. Hat-rack	Nov. 6, 1877	12	757
9,771	Fisher, Edwin, New York, N. Y. Carpeting	Mar. 6, 1877	11	376
9,772	Fisher, John, New York, N. Y., assignor to Lowell Manufacturing Company, Lowell, Mass. Carpeting	Mar. 6, 1877	11	376
9,773	Same.....same	Mar. 6, 1877	11	376
9,774	Same.....same	Mar. 6, 1877	11	376
9,775	Same.....same	Mar. 6, 1877	11	376
9,776	Same.....same	Mar. 6, 1877	11	376
9,777	Same.....same	Mar. 6, 1877	11	376
9,778	Same.....same	Mar. 6, 1877	11	376
9,779	Same.....same	Mar. 6, 1877	11	376
9,780	Same.....same	Mar. 6, 1877	11	376
9,781	Same.....same	Mar. 6, 1877	11	376
9,782	Same.....same	Mar. 6, 1877	11	376
9,783	Same.....same	Mar. 6, 1877	11	376
10,102	Fisher, John, New York, N. Y., assignor to Lowell Manufacturing Company, Lowell, Mass. Carpet	July 24, 1877	12	139
10,103	Same.....same	July 24, 1877	12	139
10,104	Same.....same	July 24, 1877	12	139
10,105	Same.....same	July 24, 1877	12	139
10,106	Same.....same	July 24, 1877	12	139
10,107	Same.....same	July 24, 1877	12	139
10,368	Same.....same	Dec. 25, 1879	12	1078
10,369	Same.....same	Dec. 25, 1877	12	1078
10,370	Same.....same	Dec. 25, 1877	12	1078
10,371	Same.....same	Dec. 25, 1877	12	1078
10,372	Same.....same	Dec. 25, 1877	12	1078
10,373	Same.....same	Dec. 25, 1877	12	1078
10,374	Same.....same	Dec. 25, 1876	12	1078
10,375	Same.....same	Dec. 25, 1877	12	1078
10,376	Same.....same	Dec. 25, 1877	12	1078
10,377	Same.....same	Dec. 25, 1877	12	1078
10,378	Same.....same	Dec. 25, 1877	12	1078
10,379	Same.....same	Dec. 25, 1877	12	1078
10,256	Fisk, Noyes W., Springfield, Mass. Imprint on bars of soap	Sept. 18, 1877	12	478
10,163	Fiske, John Thomas, jr., Pascoag, R. I. Cassimere	Aug. 28, 1877	12	353
9,757	Fiske, Joseph W., New York, N. Y. Combined water-font and contribution-box	Feb. 20, 1877	11	291
10,019	Fiske, Joseph W., New York, N. Y. Drinking-fonntain	May 29, 1877	11	926
9,881	Fleischmann, Julius W., Williamsburg, N. Y. Motto	Apr. 3, 1877	11	554
10,033	Flocke, Robert, Newark, N. J. Lock-case for satchels, &c.	June 5, 1877	11	973
9,702	Fogelstraud, Otto F., assignor to Hart, Bliven & Mead Manufacturing Company, Kensington, Conn. Flower-pot bracket	Jan. 16, 1877	11	70
9,843	Fogelstraud, Otto F., New Britain, assignor to Hart, Bliven & Mead Manufacturing Company, Kensington, Conn. Inkstand and match-safe	Mar. 6, 1877	11	376
9,844	Same.....Instand and match-box	Mar. 6, 1877	11	376
9,845	Same.....Inkstand	Mar. 6, 1877	11	376
10,316	Same.....Match-safe	Nov. 20, 1877	12	843
9,784	Folsom, James L., Brooklyn, N. Y., assignor to Hartford Carpet Company, Hartford, Conn. Carpeting	Mar. 6, 1877	11	376
9,785	Same.....same	Mar. 6, 1877	11	376
9,786	Same.....same	Mar. 6, 1877	11	376
9,787	Same.....same	Mar. 6, 1877	11	376
9,788	Same.....same	Mar. 6, 1877	11	376
9,789	Same.....same	Mar. 6, 1877	11	376
9,790	Same.....same	Mar. 6, 1877	11	376
9,791	Same.....same	Mar. 6, 1877	11	376
9,792	Same.....same	Mar. 6, 1877	11	376
9,793	Same.....same	Mar. 6, 1877	11	376
9,794	Same.....same	Mar. 6, 1877	11	376
9,795	Same.....same	Mar. 6, 1877	11	376
9,922	Same.....same	Apr. 24, 1877	11	690
9,923	Same.....same	Apr. 24, 1877	11	690
9,924	Same.....same	Apr. 24, 1877	11	690
9,925	Same.....same	Apr. 24, 1877	11	690
9,926	Same.....same	Apr. 24, 1877	11	690
9,927	Same.....same	Apr. 24, 1877	11	690
9,928	Same.....same	Apr. 24, 1877	11	690

Alphabetical list of patentees of designs for the year 1877—Continued.

No.	Name, residence, and design.	Date.	Official Gazette. Vol.	Page.
9,929	Folsom, James L., Brooklyn, N. Y., assignor to Hartford Carpet Company, Hartford Conn. Carpeting	Apr. 24, 1877	11	690
9,930	Same.....same	Apr. 24, 1877	11	690
9,931	Same.....same	Apr. 24, 1877	11	690
10,173	Same.....same	Sept. 4, 1877	12	396
10,174	Same.....same	Sept. 4, 1877	12	396
10,175	Same.....same	Sept. 4, 1877	12	396
10,176	Same.....same	Sept. 4, 1877	12	396
10,177	Same.....same	Sept. 4, 1877	12	396
10,178	Same.....same	Sept. 4, 1877	12	396
10,179	Same.....same	Sept. 4, 1877	12	396
10,180	Same.....same	Sept. 4, 1877	12	396
10,181	Same.....same	Sept. 4, 1877	12	396
10,182	Same.....same	Sept. 4, 1877	12	396
10,183	Same.....same	Sept. 4, 1877	12	396
10,184	Same.....same	Sept. 4, 1877	12	396
10,185	Same.....same	Sept. 4, 1877	12	396
10,186	Same.....same	Sept. 4, 1877	12	396
10,187	Same.....same	Sept. 4, 1877	12	396
10,188	Same.....same	Sept. 4, 1877	12	396
10,189	Same.....same	Sept. 4, 1877	12	396
10,190	Same.....same	Sept. 4, 1877	12	396
10,191	Same.....same	Sept. 4, 1877	12	396
10,192	Same.....same	Sept. 4, 1877	12	396
10,193	Same.....same	Sept. 4, 1877	12	396
10,194	Same.....same	Sept. 4, 1877	12	396
9,882	Fracker, Francis T., and L. Widmayer, assignors to P. and F. Corbin, New Britain, Conn. Hinge	Apr. 3, 1877	11	554
9,703	Francis, Augustus T., Paterson, N. J., and C. H. Royce, Monticello, N. Y. Bottle	Jan. 16, 1877	11	70
	Frey, Charles. (*See* Keller & Frey.)			
9,711	Frink, John H., Detroit, Mich. Advertising-desk	Jan. 16, 1877	11	70
10,146	Frye, Nathan, Andover, Mass. Pattern in suiting	Aug. 14, 1877	12	269
10,157	Same.....same	Aug. 21, 1877	12	313
10,158	Same.....same	Aug. 21, 1877	12	313
10,275	Fuchs, Gustav, New York, N. Y. Cigar-box	Oct. 16, 1877	12	627
9,958	Fuller, Levi K., Brattleborough, Vt. Organ-case	May 8, 1877	11	790
	Fuller, Warren & Co. (*See* Lawson, James A., assignor.)			
	Fuller, Warren & Co. (*See* Vedder & Heister, assignors.)			
	Gay, James H. (*See* Hill & Deacon, assignors.)			
10,164	Gilbert, Thomas S., assignor of one-half interest to Brewster Bros. & Co., Birmingham, Conn. Corset-gore	Aug. 28, 1877	12	353
10,147	Gill, George, and E. L. Brittin, Derby, Conn. Handle of spoons and table-cutlery	Aug. 14, 1877	12	269
9,883	Gleason, George F., Newark, N. J. Necklace	Apr. 3, 1877	11	554
9,884	Same.....same	Apr. 3, 1877	11	554
9,885	Same.....same	Apr. 3, 1877	11	554
9,886	Same.....same	Apr. 3, 1877	11	554
10,020	Same.....Ornamental chain	May 29, 1877	11	926
9,894	Goetze, Heinrich F., assignor to Roxbury Carpet Company, Boston, Mass. Carpet	Apr. 10, 1877	11	601
9,887	Goodwin, Howard F., Sheboygan, Wis. Chair and settee	Apr. 3, 1877	11	554
10,049	Graff, Charles H., Edgewater, N. Y. Bracelet	June 12, 1877	11	1012
	Gray, James. (*See* Hailes & Gray.)			
9,732	Gray, Jefferson J., Boston, Mass. Picture-frame	Feb. 6, 1877	11	198
9,959	Greasly, Edmund, Philadelphia, Pa. Fringe	May 8, 1877	11	790
	Greer & King. (*See* King, Walter A., assignor.)			
10,159	Hackenberg, Julius, New York, N. Y. Bracelet	Aug. 21, 1877	12	313
10,090	Hailes, William, and J. Gray, Albany, N. Y. Oil-stove	July 3, 1877	12	8
	Hall, Elton & Co. (*See* Culver, John M., assignor.)			
9,994	Hamer, John, Dutchess County, assignor to Falconer & Carrol, Matteawan, N. Y. Carpet	May 22, 1877	11	880
9,995	Same.....same	May 22, 1877	11	880
9,996	Same.....same	May 22, 1877	11	880
9,998	Same.....Rug	May 22, 1877	11	880
9,999	Same.....Carpet	May 22, 1877	11	880
10,148	Same.....same	Aug. 14, 1877	12	269
10,149	Same.....same	Aug. 14, 1877	12	269
10,150	Same.....same	Aug. 14, 1877	12	269
10,293	Same.....Carpet, &c.	Nov. 6, 1877	12	757
10,294	Same.....same	Nov. 6, 1877	12	757
10,295	Same.....same	Nov. 6, 1877	12	757
10,151	Hamilton, William, assignor to Dreyfuss & Sachs, New York, N. Y. Match-safe	Aug. 14, 1877	12	270
10,165	Same.....Hanging-basket	Aug. 28, 1877	12	353
10,271	Same.....Wall-pocket pattern	Oct. 9, 1877	12	36
	Harrison & Holman. (*See* Harrison, Jacob H., assignor.)			
10,056	Harrison, Charles F., New York, N. Y. Cassimere	June 19, 1877	11	1062
10,034	Harrison, Jacob H., assignor to Harrison & Holman, Davenport, Iowa. Druggists' bottle	June 5, 1877	11	973
	Harrison, Thomas S. (*See* Wilson & Harrison.)			
	Hart, Bliven & Mead Manufacturing Company. (*See* Dobelmann, John B., assignor.)			
	Same.....(*See* Fogelstrand, Otto F., assignor.)			
	Hartford Carpet Company. (*See* Folsom, James S., assignor.)			
	Same.....(*See* Heinigke, Otto, assignor.)			
	Same.....(*See* Horan, Henry, assignor.)			
	Same.....(*See* Ney, Elemir J., assignor.)			
	Same.....(*See* Nordmann, Henry, assignor.)			
	Same.....(*See* Piggott, George W., assignor.)			
	Same.....(*See* Rollings, John E., assignor.)			
	Same.....(*See* Smith, William H., assignor.)			
	Haviland, Charles P. (*See* Haviland, Edwin, assignor.)			
9,949	Haviland, Edwin, Plainfield, N. J., assignor to C. F. Haviland, Paris, France. Handle for dinner, tea, and toilet sets	May 1, 1877	11	742
10,328	Haviland, Edwin, Plainfield, N. J. Dinner, tea, and toilet set	Nov. 27, 1877	12	891
10,276	Haviland, Theodore, New York, N. Y. Handle for pottery or glassware	Oct. 16, 1877	12	627
10,072	Hayward, Samuel, Boston, Mass., assignor to J. Esty & Co., Brattleborough, Vt. Organ-case	June 26, 1877	11	1114
10,073	Same.....same	June 26, 1877	11	1114
9,704	Heald, Alfred, assignor to H. McCallum, O. Crease, and A. J. Sloan, Philadelphia, Pa. Carpet	Jan. 16, 1877	11	70
9,705	Same.....same	Jan. 16, 1877	11	70

Alphabetical list of patentees of designs for the year 1877—Continued.

No.	Name, residence, and design.	Date.	Official Gazette. Vol.	Page.
9,733	Heath, Lorenzo P., assignor to Powers Paper Company, Springfield, Mass. Paper box	Feb. 6, 1877	11	198
9,867	Same.....same	Mar. 27, 1877	11	504
10,288	Heckmann, Louis, assignor of two-thirds interest to W. H. Wade and E. P. Davis, Plainville, Mass. Ornamental scroll-work for jewelry	Oct. 30, 1877	12	717
10,289	Heckmann, Karl F., assignor to J. T. Bacon & Co., Wrentham, Mass. Ornamental chain-link	Oct. 30, 1877	12	717
9,796	Heinigke, Otto, New Utrecht, N. Y., assignor to Hartford Carpet Company, Hartford, Conn. Carpeting	Mar. 6, 1877	11	376
9,797	Same.....same	Mar. 6, 1877	11	376
9,798	Same.....same	Mar. 6, 1877	11	376
9,799	Same.....same	Mar. 6, 1877	11	376
9,800	Same.....same	Mar. 6, 1877	11	376
9,801	Same.....same	Mar. 6, 1877	11	376
9,802	Same.....same	Mar. 6, 1877	11	376
9,803	Same.....same	Mar. 6, 1877	11	376
9,804	Same.....same	Mar. 6, 1877	11	376
9,805	Same.....same	Mar. 6, 1877	11	376
9,806	Same.....same	Mar. 6, 1877	11	376
9,807	Same.....same	Mar. 6, 1877	11	376
9,808	Same.....same	Mar. 6, 1877	11	376
9,809	Same.....same	Mar. 6, 1877	11	376
9,810	Same.....same	Mar. 6, 1877	11	376
9,932	Same.....same	Apr. 24, 1877	11	690
9,933	Same.....same	Apr. 24, 1877	11	690
9,934	Same.....same	Apr. 24, 1877	11	690
9,935	Same.....same	Apr. 24, 1877	11	690
10,000	Heinigke, Otto, New York, assignor to W. S. Blunt, Bay Ridge, N. Y. Pump	May 22, 1877	11	880
10,195	Heinigke, Otto, New Utrecht, N. Y., assignor to Hartford Carpet Company, Hartford, Conn. Carpets	Sept. 4, 1877	12	396
10,196	Same.....same	Sept. 4, 1877	12	396
10,197	Same.....same	Sept. 4, 1877	12	396
10,198	Same.....same	Sept. 4, 1877	12	396
10,199	Same.....same	Sept. 4, 1877	12	396
10,200	Same.....same	Sept. 4, 1877	12	396
10,201	Same.....same	Sept. 4, 1877	12	396
10,202	Same.....same	Sept. 4, 1877	12	396
10,203	Same.....same	Sept. 4, 1877	12	396
	Heister, Tobias S. (*See* Vedder & Heister.)			
9,687	Heller, William, New York, N. Y. Traveling bag and satchel	Jan. 2, 1877	11	6
10,027	Hensel, George S., assignor to self, C. D. and S. B. Colladay, Philadelphia, Pa. Tassel	May 29, 1877	11	926
9,734	Herriet, Julius, assignor to D. W. Bruce, New York, N. Y. Font of printing-type	Feb. 6, 1877	11	198
9,811	Same.....same	Mar. 6, 1877	11	376
10,022	Same.....Font of ornamental printing-type	May 29, 1877	11	926
10,257	Same.....same	Sept. 18, 1877	12	478
10,292	Same.....same	Nov. 6, 1877	12	757
10,311	Same.....same	Nov. 13, 1877	12	798
10,260	Hicks, William S., New York, N. Y. Pencil-case	Sept. 25, 1877	12	519
10,171	Hill, Alfred, assignor to S. Sanford, Amsterdam, N. Y. Carpet	Aug. 28, 1877	12	354
9,723	Hill, Judson E., and W. H. Deacon, assignor to J. H. Gay, Philadelphia, Pa. Carpet	Jan. 30, 1877	11	151
9,888	Hofstatter, Adolph G., New York, N. Y. Chair frame	Apr. 3, 1877	11	554
9,895	Holmes, Thomas, Brooklyn, N. Y. Cassimere	Apr. 10, 1877	11	601
9,950	Same.....Fancy cassimere	May 1, 1877	11	742
9,951	Same.....same	May 1, 1877	11	742
10,152	Holt, James D., Philadelphia, Pa. Advertising-card	Aug. 14, 1877	12	270
9,863	Holton, Francis H., Brooklyn, N. Y., assignor to O. Cleveland, Jersey City, N. J. Erasive head for lead-pencils	Mar. 20, 1877	11	460
	Hopkins & Dickinson Manufacturing Company. (*See* Tiemann, Simpson & Collins, assignors.)			
10,050	Hopkins, Sylvanus C., Boston, Mass. Chair-frame	June 12, 1877	11	1012
9,812	Horan, Henry, East Orange, N. J., assignor to Hartford Carpet Company. Hartford, Conn. Carpeting	Mar. 6, 1877	11	376
9,813	Same.....same	Mar. 6, 1877	11	376
9,814	Same.....same	Mar. 6, 1877	11	376
9,815	Same.....same	Mar. 6, 1877	11	376
9,816	Same.....same	Mar. 6, 1877	11	376
9,817	Same.....same	Mar. 6, 1877	11	376
9,818	Same.....same	Mar. 6, 1877	11	376
9,819	Same.....same	Mar. 6, 1877	11	376
9,820	Same.....same	Mar. 6, 1877	11	376
9,821	Same.....same	Mar. 6, 1877	11	376
9,936	Same.....same	Apr. 24, 1877	11	690
9,937	Same.....same	Apr. 24, 1877	11	690
9,938	Same.....same	Apr. 24, 1877	11	690
9,939	Same.....same	Apr. 24, 1877	11	690
9,940	Same.....same	Apr. 24, 1877	11	690
10,204	Same.....same	Sept. 4, 1877	12	396
10,205	Same.....same	Sept. 4, 1877	12	396
10,206	Same.....same	Sept. 4, 1877	12	396
10,207	Same.....same	Sept. 4, 1877	12	396
10,208	Same.....same	Sept. 4, 1877	12	396
10,209	Same.....same	Sept. 4, 1877	12	396
10,210	Same.....same	Sept. 4, 1877	12	396
10,211	Same.....same	Sept. 4, 1877	12	396
10,212	Same.....same	Sept. 4, 1877	12	396
10,213	Same.....same	Sept. 4, 1877	12	396
10,214	Same.....same	Sept. 4, 1877	12	396
10,215	Same.....same	Sept. 4, 1877	12	396
10,216	Same.....same	Sept. 4, 1877	12	396
10,217	Same.....same	Sept. 4, 1877	12	396
9,988	Hubbard, Alexander S., assignor to L. Candee & Co., New Haven, Conn. Overshoe	May 15, 1877	11	834
	Hutchins, Adrian A. (*See* Hutchins, Emory W. and A. A.)			
10,339	Hutchins, Emory W., Fremont, and A. A. Hutchins, Clyde, Ohio. Toilet-frame	Dec. 11, 1877	12	981
9,889	Hutchison, James, Newark, assignor to L. D. Farr, Camden, N. J. Oil-cloth	Apr. 3, 1877	11	554
9,735	Ihlenburg, Hermann, assignor to McKellar, Smiths & Jordan, Philadelphia, Pa, Font of printing-type	Feb. 6, 1877	11	198
10,340	Ingraham, Elias, Bristol, Conn. Pendulum	Dec. 11, 1877	12	981

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No.	Name, residence, and design.	Date.	Official Gazette. Vol.	Page.
9,741	Jarrett, Henry T., W. C. Conrad, and F. H. Renz, New York, N. Y. Licorice-stick	Feb. 13, 1877	11	251
10,312	Jeffords, John E., Philadelphia, Pa. White-lined pipkins	Nov. 13, 1877	12	798
10,313	Same.....Basket tea-pot	Nov. 13, 1877	12	798
	Jennings, Abraham G. (*See* Robinson, Joseph, assignor.)			
10,264	Jennings, Abraham G., Brooklyn, N. Y. Lace-fabric	Oct. 2, 1877	12	5
10,283	Jerecki, Albert H., Erie, Pa. Hand-wheel for valves	Oct. 23, 1877	12	669
10,096	Jones, Jenkin, Pittsburg, Pa. Glassware	July 17, 1877	12	95
10,296	Same.....same	Nov. 6, 1877	12	757
10,297	Same.....same	Nov. 6, 1877	12	757
9,989	Judd, Albert D., New Haven, Conn. Lamp-bracket	May 15, 1877	11	834
10,284	Kaldenberg, F. Julins, New York, N. Y. Umbrella-handle	Oct. 23, 1877	12	669
	Keeley, Oliver B., *et al.* (*See* Smith & Brown, assignors.)			
9,890	Keeley, Oliver B., Spring City, assignor to self and E. S. Shantz, Philadelphia, Pa. Cooking-stove	Apr. 3, 1877	11	555
9,941	Keller, Frank, and C. Frey, New York, N. Y. Locket	Apr. 24, 1877	11	690
9,846	Kellett, Samuel, San Francisco, Cal. Center-piece	Mar. 6, 1877	11	376
10,160	Same.....same	Aug. 21, 1877	12	313
10,161	Same.....same	Aug. 21, 1877	12	313
10,379	Kempshall, Eleazer, New Britain, Conn. Snap-hook	Nov. 20, 1877	12	843
9,868	Keppler, Martin, New York, N. Y. Ball-room favor	Mar. 27, 1877	11	504
10,035	Kerr, Hugh S., assignor to G. D., T., and J. Bromley, Philadelphia, Pa. Carpet	June 5, 1877	11	973
10,036	Same.....same	June 5, 1877	11	973
10,037	Same.....same	June 5, 1877	11	973
9,990	Kimball, Charles, Mohegan, R. I. Fancy cassimere	May 15, 1877	11	834
9,760	Kimball, Horace A., Pascoag, R. I. Cassimere	Feb. 27, 1877	11	332
9,761	Same.....same	Feb. 27, 1877	11	332
9,762	Same.....same	Feb. 27, 1877	11	332
9,763	Same.....same	Feb. 27, 1877	11	332
9,764	Same.....same	Feb. 27, 1877	11	332
9,765	Same.....same	Feb. 27, 1877	11	332
9,766	Same.....same	Feb. 27, 1877	11	332
9,952	Same.....Fancy cassimere	May 1, 1877	11	742
9,953	Same.....same	May 1, 1877	11	742
10,317	Kimball, Horace A., Providence, R. I. Cassimere for cloakings	Nov. 20, 1877	12	843
10,318	Same.....same	Nov 20, 1877	12	843
9,714	King, Walter A., assignor to Greer & King, Dayton, Ohio. Stove	Jan. 23, 1877	11	113
7,724	Kintz, Peter, assignor to Bradley & Hubbard Manufacturing Company, West Meriden, Conn. Lamp-holder	Jan. 30, 1877	11	154
10,074	Kirschbaum, John, assignor to Novelty Manufacturing Company, Waterbury, Conn. Cover of smoking-pipes	June 26, 1877	11	1114
10,230	Krayl, Friedrich, Chicago, Ill. Easy-chair	Sept. 4, 1877	12	396
	Krickl, Gould & Co. (*See* Krickl, Moritz, assignor.)			
10,057	Krickl, Moritz, assignor to Krickl, Gould & Co., New York, N. Y. Stair-carpet tack	June 19, 1877	11	1062
10,349	Krickl, Moritz, New York, N. Y. Step-plate	Dec. 11, 1877	12	982
10,350	Same.....same	Dec. 11, 1877	12	982
10,351	Same.....same	Dec. 11, 1877	12	982
10,092	Kuehbarth, Philip P., assignor to A. P. Best & Co., Buffalo, N. Y. Parlor-table	July 10, 1877	12	54
10,252	Same.....Chair and sofa	Sept. 18, 1877	12	478
	La Belle Glass Company. (*See* Cate, Elijah G., assignor.)			
10,265	Lang, Harvey, Kennett's Square, Pa. Bracelet	Oct. 2, 1877	12	5
	Lauriat, Charles E., *et al.* (*See* Becker, John, assignor.)			
10,097	Lawrence, Franklin M., Portland, Me. Range	July 17, 1877	12	95
10,084	Lawson, James A., assignor to Fuller, Warren & Co., Troy, N. Y. Heating-stove	July 3, 1877	12	8
10,098	Same.....same	July 17, 1877	12	95
10,129	Same.....same	July 24, 1877	12	139
10,143	Same.....Cooking-stove	Aug. 7, 1877	12	229
10,353	Same.....Parlor oven-stove	Dec. 18, 1877	12	1027
10,085	Lilienthal, Ernest R., San Francisco, Cal. Liquor-flask	July 3, 1877	12	8
10,093	Litchfield, Emeline A., Somerville, Mass. Cuff	July 10, 1877	12	54
9,688	Little, Andrew, New York, N. Y. Font of printing-type	Jan. 2, 1877	11	6
10,352	Same.....same	Dec. 18, 1877	12	1027
9,914	Lomas, John R., assignor to B. Shoninger, New Haven, Conn. Organ-case	Apr. 17, 1877	11	642
	Lowell Manufacturing Company. (*See* Fisher, John, assignor.)			
	Same.....(*See* Ney, Elemir J., assignor.)			
	Same.....(*See* Swapp, Charles W., assignor.)			
10,108	Lowenthal, Samuel, Cincinnati, Ohio. Cigar-box	July 24, 1877	12	139
10,341	Luchs, Asher N., New York, N. Y. Cuff and collar box	Dec. 11, 1877	12	981
9,822	Lyman, William W., West Meriden, Conn. Match-holder	Mar. 6, 1877	11	376
10,134	Lyman, William W., assignor to Meriden Flint Glass Company, Meriden, Conn. Glass shade	July 31, 1877	12	190
9,915	Lyon, James B., Pittsburg, Pa. Glassware	Apr. 17, 1877	11	642
9,692	Macbrair, William C., Cincinnati, Ohio. Fan	Jan. 9, 1877	11	40
10,099	Manning, Alfred J., assignor to A. Dougherty, New York, N. Y. Playing-cards	July 17, 1877	12	95
10,238	Same.....Back of playing-cards	Sept. 11, 1877	12	432
10,239	Same.....same	Sept. 11, 1877	12	432
10,240	Same.....same	Sept. 11, 1877	12	432
10,241	Same.....same	Sept. 11, 1877	12	432
10,242	Same.....same	Sept. 11, 1877	12	432
10,243	Same.....same	Sept. 11, 1877	12	432
10,244	Same.....same	Sept. 11, 1877	12	432
10,245	Same.....same	Sept. 11, 1877	12	432
10,246	Same.....same	Sept. 11, 1877	12	452
10,247	Same.....same	Sept. 11, 1877	12	432
	Marder, Luse & Co. (*See* Capitain, William F., assignor.)			
9,869	Markoe, Fredrick, assignor to G. Booth & Co., Philadelphia, Pa. Match-box	Mar. 27, 1877	11	504
10,279	Martin, Arthur, Paris, France, assignor to Roxbury Carpet Company, Boston, Mass. Carpet	Oct. 23, 1877	12	669
	Mason, Charles F., *et al.* (*See* McGee, Patrick, assignor.)			
10,086	Matthai, William H., Baltimore, Md. Match-safe	July 3, 1877	12	8
	Mayer, Stroose & Co. (*See* Adler, Max, assignor.)			
	McCallum, Hugh, *et al.* (*See* Heald, Alfred, assignor.)			
9,918	McCoy, James, Ypsilanti, Mich. Badge	Apr. 17, 1877	11	642
10,058	McGee, Patrick, Blackstone, Mass., assignor to C. F. and A. L. Mason, Providence, R. I. Fancy cassimere	June 19, 1877	11	1062
10,320	McGill, George W., New York, N. Y. Clip for suspending cards	Nov. 20, 1877	12	843
	McKellar, Smiths & Jordan. (*See* Ihlenburg, Herman, assignor.)			
10,337	McLean, John, Brooklyn, N. Y. Gate and fence	Dec. 4, 1877	12	942

Alphabetical list of patentees of designs for the year 1877—Continued.

No.	Name, residence, and design.	Date.	Official Gazette. Vol.	Page.
9,706	McNair, David, assignor to Roxbury Carpet Company, Boston, Mass. Carpet	Jan. 16, 1877	11	70
10,166	Same same	Aug. 28, 1877	12	353
10,355	Same same	Dec. 18, 1877	12	1027
10,001	Meader, George W., Woonsocket, R. I. Shoe	May 22, 1877	11	880
	Meriden Britannia Company. (*See* Smith, William M., assignor.)			
	Meriden Flint Glass Company. (*See* Lyman, William W., assignor.)			
10,040	Merrill, Ralph M., and J. L. Pearson, Laconia, N. H. Molding for door and window casings	June 5, 1877	11	973
10,051	Messer, Louis, New York, N. Y. Pocket-book clasp	June 12, 1877	11	1012
10,266	Same same	Oct. 2, 1877	12	5
9,693	Meyer, Charles T. and V. E., Bergen, N. J., assignors to E. C. Sampson, New York, N. Y. Oil-cloth	Jan. 9, 1877	11	40
9,694	Same same	Jan. 9, 1877	11	40
9,695	Same same	Jan. 9, 1877	11	40
9,696	Same same	Jan. 9, 1877	11	40
9,697	Same same	Jan. 9, 1877	11	40
9,698	Same same	Jan. 9, 1877	11	40
9,747	Same same	Feb. 20, 1877	11	291
9,748	Same same	Feb. 20, 1877	11	291
9,749	Same same	Feb. 20, 1877	11	291
9,750	Same same	Feb. 20, 1877	11	291
9,751	Same same	Feb. 20, 1877	11	291
9,907	Same same	Apr. 17, 1877	11	642
9,908	Same same	Apr. 17, 1877	11	642
9,909	Same same	Apr. 17, 1877	11	642
9,910	Same same	Apr. 17, 1877	11	642
9,911	Same same	Apr. 17, 1877	11	642
9,912	Same same	Apr. 17, 1877	11	642
9,913	Same same	Apr. 17, 1877	11	642
10,041	Same same	June 5, 1877	11	973
10,042	Same same	June 5, 1877	11	973
10,043	Same same	June 5, 1877	11	973
10,044	Same same	June 5, 1877	11	973
10,064	Same same	June 19, 1877	11	1063
10,065	Same same	June 19, 1877	11	1063
10,066	Same same	June 19, 1877	11	1063
10,140	Same same	Aug. 7, 1877	12	229
10,141	Same same	Aug. 7, 1877	12	229
10,142	Same same	Aug. 7, 1877	12	229
10,272	Same same	Oct. 9, 1877	12	36
10,273	Same same	Oct. 9, 1877	12	36
10,298	Same same	Nov. 6, 1877	12	757
10,299	Same same	Nov. 6, 1877	12	757
10,300	Same same	Nov. 6, 1877	12	757
10,301	Same same	Nov. 6, 1877	12	757
10,302	Same same	Nov. 6, 1877	12	757
10,303	Same same	Nov. 6, 1877	12	757
10,304	Same same	Nov. 6, 1877	12	757
10,329	Same same	Nov. 27, 1877	12	891
10,330	Same same	Nov. 27, 1877	12	891
10,331	Same same	Nov. 27, 1877	12	891
10,167	Meyer, Jeremiah, assignor to D. Pewers & Sons, Lansingburg, N. Y. Oil-cloth	Aug. 28, 1877	12	354
	Meyer, Victor E. (*See* Meyer, Charles T. and V. E.)			
	Michigan Stove Company. (*See* Roberts, Theodore H., assignor.)			
	Middletown Plate Company. (*See* Conradt, Augustus, assignor.)			
	Miller, Isaac M. (*See* Miller, James W. and I. M.)			
10,045	Miller, James W. and I. M., Newark, N. J. Stud and button	June 5, 1877	11	973
10,100	Same Button, stud, &c	July 17, 1877	12	95
10,354	Same Jewelry	Dec. 15, 1877	12	1027
10,383	Same same	Dec. 28, 1877	12	1078
10,277	Miller, Watson J., Chicopee Falls, Mass., assignor to Webster & Bro., New York, N. Y. Dessert-set	Oct. 16, 1877	12	627
10,075	Minott, Levi E., Sheboygan, Wis. Cradle	June 26, 1877	11	1114
10,059	Mitchell, Robert C., Aurora, Ind. Picture-frame	June 19, 1877	11	1062
9,689	Morgan, Elisha, Springfield, Mass. Paper box	Jan. 2, 1877	11	6
9,960	Morgan, James, Brooklyn, N. Y. Monument	May 8, 1877	11	790
9,961	Same same	May 8, 1877	11	790
9,962	Same same	May 8, 1877	11	790
9,963	Same same	May 8, 1877	11	790
9,964	Same same	May 8, 1877	11	790
9,965	Same same	May 8, 1877	11	790
9,966	Same same	May 8, 1877	11	790
9,967	Same same	May 8, 1877	11	790
9,968	Same same	May 8, 1877	11	790
10,023	Same same	May 29, 1877	11	927
10,024	Same same	May 29, 1877	11	927
10,231	Morris, William, London, England. Printed and woven fabric	Sept. 4, 1877	12	396
10,267	Same same	Oct. 2, 1877	12	5
10,261	Moulton, David B., Lynn, Mass. Ornamenting shoes and other articles	Sept. 25, 1877	12	519
9,969	Müller, Hermann J., New York, N. Y. Clock-case	May 8, 1877	11	790
10,094	Same same	July 10, 1877	12	54
10,253	Mulligan, Eugene, and J. H. Wood, Brooklyn, N. Y. Picture-frame	Sept. 18, 1877	12	478
10,381	Neally, George, New York, N. Y. Pattern for windmills	Dec. 25, 1877	12	1078
10,002	Neil, John, New York, N. Y., assignor to the Bigelow Carpet Company, Clinton, Mass. Carpet	May 22, 1877	11	880
	New York City Attrition Mill Company. (*See* Smith, Alfred C., jr., assignor.)			
9,823	Ney, Elemir J., assignor to Lowell Manufacturing Company, Lowell, Mass. Carpeting	Mar. 6, 1877	11	376
9,824	Same same	Mar. 6, 1877	11	376
9,825	Same same	Mar. 6, 1877	11	376
9,826	Same same	Mar. 6, 1877	11	376
9,827	Same same	Mar. 6, 1877	11	376
9,828	Same same	Mar. 6, 1877	11	376
9,829	Same same	Mar. 6, 1877	11	376
9,830	Ney, Elemir J., Dracut, Mass., assignor to Hartford Carpet Company, Hartford, Conn. Carpeting	Mar. 6, 1877	11	376
9,831	Same same	Mar. 6, 1877	11	376
9,832	Same same	Mar. 6, 1877	11	376
9,833	Same same	Mar. 6, 1877	11	376

Alphabetical list of patentees of designs for the year 1877—Continued.

No.	Name, residence, and design.	Date.	Official Gazette. Vol.	Page.
9,834	Ney, Elemir J., Dracut, Mass., assignor to Hartford Carpet Company, Hartford, Conn. Carpeting	Mar. 6, 1877	11	376
10,109	Ney, Elemir J., assignor to Lowell Manufacturing Company, Lowell, Mass. Carpet	July 24, 1877	12	139
10,110	Same.....same	July 24, 1877	12	139
10,111	Same.....same	July 24, 1877	12	139
10,112	Same.....same	July 24, 1877	12	139
10,113	Same.....same	July 24, 1877	12	139
10,114	Same.....same	July 24, 1877	12	139
10,115	Same.....same	July 24, 1877	12	139
10,116	Same.....same	July 24, 1877	12	139
10,117	Same.....same	July 24, 1877	12	139
10,118	Same.....same	July 24, 1877	12	139
10,119	Same.....same	July 24, 1877	12	139
10,120	Same.....same	July 24, 1877	12	139
9,864	Nirdlinger, Albert H., Rochester, N. Y. Burial-casket	Mar. 20, 1877	11	460
9,835	Nordmann, Henry, New York, N. Y., assignor to Hartford Carpet Company, Hartford, Conn. Carpeting	Mar. 6, 1877	11	376
9,836	Same.....same	Mar. 6, 1877	11	376
9,837	Same.....same	Mar. 6, 1877	11	376
9,838	Same.....same	Mar. 6, 1877	11	376
10,218	Same.....Carpets	Sept. 4, 1877	12	396
	North American Iron Works. (*See* Tweeddale, William, assignor.)			
9,767	Norton, Edwin, Chicago, Ill. Can	Feb. 20, 1877	11	332
10,305	Same.....Spice-caddy	Nov. 6, 1877	12	757
	Novelty Manufacturing Company. (*See* Kirschbaum, John, assignor.)			
9,847	Olmstead, John A., Richmond County, N. Y., assignor to Union India Rubber Company. Rubber shoes	Mar. 6, 1877	11	376
10,323	Osborne, Wilbur F., Ansonia, Conn. Buckle	Nov. 20, 1877	12	843
9,896	Overton, Thomas, Rockport, Tex. Sash-holder	Apr. 10, 1877	11	601
10,274	Palmenberg, Joseph R., New York, N. Y. Hat and coat rack	Oct. 16, 1877	12	627
10,332	Palmer, Theodore J., New York, N. Y. Rocking-chair frame	Nov. 27, 1877	12	891
10,280	Pardoe, William A., assignor to A. Smith & Sons Carpet Company, Yonkers, N. Y. Carpet	Oct. 23, 1877	12	669
10,121	Pattberg, Lewis, Jersey City, N. J. Picture-frame	July 24, 1877	12	139
9,744	Pears, Harry P., assignor to Bakewell, Pears & Co., Pittsburg, Pa. Glassware	Feb. 13, 1877	11	251
	Pearson, John L. (*See* Merrill & Pearson.)			
9,736	Peirce, Charles E., Lowell, Mass. Wire table-mat	Feb. 6, 1877	11	198
10,135	Perry, Josiah, Dudley, Mass. Cassimere	July 31, 1877	11	190
10,136	Same.....same	July 31, 1877	11	190
9,759	Pienovi, Joseph, Newark, N. J. Rubber shoe	Feb. 20, 1877	11	291
10,384	Same.....Boots and shoes	Dec. 25, 1877	12	1078
9,942	Piggott, George W., New York, N. Y., assignor to Hartford Carpet Company, Hartford, Conn. Carpeting	Apr. 24, 1877	11	690
9,943	Same.....same	Apr. 24, 1877	11	690
10,219	Same.....Carpets	Sept 4, 1877	12	396
10,220	Same.....same	Sept. 4, 1877	12	396
9,991	Pinckney, Stephen R., New York, N. Y. Glass-jar	May 15, 1877	11	834
	Plume & Atwood Manufacturing Company. (*See* Atwood, Lewis J., assignor.)			
	Porter & Co., C. B. (*See* Wilkinson, William, assignor.)			
	Powers & Sons, D. (*See* Meyer, Jeremiah, assignor.)			
	Powers Paper Company. (*See* Heath, Lorenzo P., assignor.)			
9,948	Prahar, Louis, New York, N. Y. Pocket-book fastener	Apr. 24, 1877	11	690
9,839	Pressprich, Otto, New York, N. Y. Instrument for regulating the pressure of gas	Mar. 6, 1877	11	376
	Proctor, David C. (*See* Culter & Proctor.)			
10,281	Racine, Ulysses, New York, N. Y. Picture-frame	Oct. 23, 1877	12	669
10,156	Raup, Daniel, assignor of one-half interest to D. Cline, Watsontown, Pa. Wall-pocket	Aug. 14, 1877	12	270
9,916	Raynaud, Eugene, Paris, France, assignor to D. St. Amant & Son, New York, N. Y. Bottle	Apr. 17, 1877	11	642
10,321	Reid, William M., Amsterdam, N. Y. Burial-casket	Nov. 20, 1877	12	843
10,362	Same.....same	Dec. 18, 1877	12	1027
	Renz, Ferdinand H. (*See* Jarrett, Conrad & Renz.)			
10,101	Renz, Mitchell, Naugatuck, Conn. Shears and scissors	July 17, 1877	12	95
	Ritchie, Francis. (*See* Vedder, Ritchie & Heister.)			
	Same.....(*See* Vedder & Ritchie.)			
10,067	Roberts, Henry P., Tunkhannock, Pa. Flower-stand	June 19, 1877	11	1063
	Roberts Manufacturing Company. (*See* Sturn, August, assignor.)			
10,060	Roberts, Theodore H., assignor to Michigan Stove Company, Detroit, Mich. Cooking-range	June 19, 1877	11	1062
10,003	Robinson, Joseph, assignor to A. G. Jennings, Brooklyn, N. Y. Lace-fabric	May 22, 1877	11	889
	Rogers & Bro., C. (*See* Burr, Russell, assignor.)			
9,742	Rogers, Edward F., Chelsea, Mass. Vapor-stove	Feb. 13, 1877	11	291
10,052	Rogers, John, New York, N. Y. Group of statuary	June 12, 1877	11	1012
10,076	Same.....same	June 26, 1877	11	1114
10,336	Same.....same	Nov. 27, 1877	12	891
9,944	Rollings, John E., New York, N. Y., assignor to Hartford Carpet Company, Hartford, Conn. Carpeting	Apr. 24, 1877	11	690
9,945	Same.....same	Apr. 24, 1877	11	690
9,946	Same.....same	Apr. 24, 1877	11	690
10,221	Same.....Carpets	Sept. 4, 1877	12	396
10,222	Same.....same	Sept. 4, 1877	12	396
10,223	Same.....same	Sept. 4, 1877	12	396
9,725	Rosenbach, Peter, Brooklyn, N. Y. Match-box	Jan. 30, 1877	11	154
10,034	Rosenbach, Peter, New York, N. Y. Card-rack	May 22, 1877	11	880
10,130	Rosenbach, Peter, Brooklyn, N. Y. Card-basket	July 24, 1877	12	139
	Roxbury Carpet Company. (*See* Allen, Frank E., assignor.)			
	Same.....(*See* Baye, Alphonse, assignor.)			
	Same.....(*See* Daniel, Engène, assignor.)			
	Same.....(*See* Goetze, Heinrich F., assignor.)			
	Same.....(*See* Martin, Arthur, assignor.)			
	Same.....(*See* McNair, David, assignor.)			
	Same.....(*See* Stearns, Thomas J., assignor.)			
	Royce, Charles H. (*See* Francis & Royce.)			
	Ryman, James L. (*See* Fish, Leander E., assignor.)			
	Sachs, S., *et al.* (*See* Hamilton, William, assignor.)			
	Sachs, Samuel. (*See* Dreyfuss & Sachs.)			
10,162	Sage, Edwin E., Chicago, Ill. Advertising-balls	Aug. 21, 1877	12	313

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No.	Name, residence, and design.	Date.	Official Gazette. Vol.	Page.
	Sampson, Edward C. (*See* Meyer, Charles T. and V. E., assignors.)			
	Sanford, George D. (*See* Sanford, Watson and G. D.)			
	Sanford, S. (*See* Hill, Alfred, assignor.)			
	Sanford, Stephen. (*See* De Hart, William, assignor.)			
	Same.....(*See* Uster, Cornelius, assignor.)			
9,715	Sanford, Watson, Brooklyn, and G. D. Sanford, Peekskill, N. Y. Stove	Jan. 23, 1877	11	113
9,870	Schrag, Philip, New York, assignor to E. Faber, Port Richmond, N. Y. Pen and pencil holder	Mar. 27, 1877	11	504
10,046	Schuckers, Jacob W., New York, N. Y., assignor to G. B. Collier, Philadelphia, Pa. Book-case	June 5, 1877	11	973
10,025	Schulenburg, Charles, Detroit, Mich. Billiard-table	May 29, 1877	11	927
10,333	Schwartz, Alonzo, New York, N. Y. Badge	Nov. 27, 1877	12	891
10,382	Sealy, John, Newark, N. J. Hat-block	Dec. 25, 1877	12	1078
10,361	Sesnon, Michael G., Brooklyn, N. Y. Wall-pocket	Dec. 18, 1877	12	1027
9,854	Seymour, Joseph, Syracuse, N. Y. Handle for knives, forks, and spoons	Mar. 13, 1877	11	421
	Shantz, Enos S. (*See* Keeley, Oliver B., assignor.)			
	Shantz, Enos S., *et al.* (*See* Smith & Brown, assignors.)			
10,262	Shiebler, George W., Newark, N. J. Handle for spoons, forks, &c	Sept. 25, 1877	12	519
	Shoninger, B. (*See* Lomas, John R., assignor.)			
	Simpson & Co. (*See* Brambach, Stephan, assignor.)			
	Simpson, William, jr. (*See* Tiemann, Simpson & Collins.)			
	Sloan, Andrew J., *et al.* (*See* Heald, Alfred, assignor.)			
	Smith & Co., H. D. (*See* Smith, George F., assignor.)			
	Smith & Sons Carpet Company, A. (*See* Pardoe, W. A., assignor.)			
	Smith & Sons Carpet Company, Alexander. (*See* Campbell, John, assignor.)			
9,737	Smith, Alfred C., jr., assignor to New York City Attrition Mill Company, New York, N. Y. Paper-weight	Feb. 6, 1877	11	198
9,897	Smith, Algernon D., Cincinnati, Ohio. Sign	Apr. 10, 1877	11	601
9,871	Smith, Garrettson, and H. Brown, assignors to E. S. Shantz, Philadelphia, and O. B. Keeley, Spring City, Pa. Cooking-stove	Mar. 27, 1877	11	504
9,872	Same..... Cooking stove or range	Mar. 27, 1877	11	504
9,690	Smith, George F., assignor to H. D. Smith & Co., Plantsville, Conn. Carriage-top joint	Jan. 2, 1877	11	6
10,224	Smith, John H., Enfield, assignor to Hartford Carpet Company, Hartford, Conn. Carpets	Sept. 4, 1877	12	396
10,077	Smith, Thomas C., Green Point, N. Y. Milk-jug	June 26, 1877	11	1114
10,225	Smith, William H., Enfield, assignor to Hartford Carpet Company, Hartford, Conn. Carpets	Sept. 4, 1877	12	396
10,226	Same.....same	Sept. 4, 1877	12	396
10,227	Same.....same	Sept. 4, 1877	12	396
10,228	Same.....same	Sept. 4, 1877	12	396
10,078	Smith, William M., assignor to Meriden Britannia Company, West Meriden, Conn. Funereal ornament	June 26, 1877	11	1114
10,347	Smith, William M., assignor to Meriden Britannia Company, Meriden, Conn. Casket-molding	Dec. 11, 1877	12	982
10,348	Same.....Casket-screw	Dec. 11, 1877	12	982
10,357	Same.....Burial-casket handle	Dec. 18, 1877	12	1027
	St. Amant & Son, D. (*See* Raynaud, Eugene, assignor.)			
	Stanley Works. (*See* Steele, Elbridge J., assignor.)			
9,891	Starr, John F., jr., Camden, N. J. Sheet-metal water-pipe	Apr. 3, 1877	11	555
9,699	Stearns, Thomas J., assignor to Roxbury Carpet Company, Boston, Mass. Carpet	Jan. 9, 1877	11	40
9,707	Same.....same	Jan. 16, 1877	11	70
9,708	Same.....same	Jan. 16, 1877	11	70
9,752	Same.....same	Feb. 20, 1877	11	291
9,753	Same.....same	Feb. 20, 1877	11	291
9,768	Same.....same	Feb. 20, 1877	11	332
9,853	Same.....same	Mar. 13, 1877	11	421
10,005	Same.....same	May 22, 1877	11	880
10,038	Same.....same	June 5, 1877	11	973
10,039	Same.....same	June 5, 1877	11	973
10,153	Same.....same	Aug. 14, 1877	12	270
10,154	Same.....same	Aug. 14, 1877	12	270
10,168	Same.....same	Aug. 28, 1877	12	354
10,306	Same.....same	Nov. 6, 1877	12	757
10,307	Same.....same	Nov. 6, 1877	12	757
10,356	Same.....same	Dec. 18, 1877	12	1027
10,308	Steele, Elbridge J., assignor to Stanley Works, New Britain, Conn. Hinge	Nov. 6, 1877	12	757
10,122	Steinhardt, Bernhardt T., New York, N. Y. Butter-cooler	July 24, 1877	12	139
10,026	Sternheimer, Moses, New York, N. Y. Bracelet	May 29, 1877	11	927
10,268	Stevens, Samuel, Jersey City, N. J. Dish-handle	Oct. 2, 1877	12	5
10,053	Stith, Ferdinando, Washington, D. C. India-rubber eraser	June 12, 1877	11	1012
	St. John, Henry. (*See* Crisand, Emil, assignor.)			
	Same.....(*See* Donlevy, Alice, assignor.)			
	Storm, George. (*See* Straiton & Storm.)			
10,061	Stout, Paul A., Allegheny, Pa. Stucco center-piece	July 19, 1877	11	1062
10,229	Straiton, John, and G. Storm, Bay Side, N. Y. Cigar-box	Sept. 4, 1877	12	396
	Strouse & Co., Jacob. (*See* Adler, Max, assignor.)			
	Stuart, Peterson & Co. (*See* Beesley, Jacob, assignor.)			
9,855	Sturm, August, assignor to Roberts Manufacturing Company, New York, N. Y. Trimming	Mar. 13, 1877	11	421
9,840	Swapp, Charles W., assignor to Lowell Manufacturing Company, Lowell, Mass. Carpeting	Mar. 6, 1877	11	376
9,841	Same.....same	Mar. 6, 1877	11	376
9,842	Same.....same	Mar. 6, 1877	11	376
10,123	Same.....Carpet	July 24, 1877	12	139
10,124	Same.....same	July 24, 1877	12	139
10,125	Same.....same	July 24, 1877	12	139
10,126	Same.....same	July 24, 1877	12	139
10,127	Same.....same	July 24, 1877	12	139
10,128	Same.....same	July 24, 1877	12	139
9,865	Taft, Joseph W., Chicago, Ill. Picture-exhibiter	Mar. 20, 1877	11	460
10,006	Thackeray, William H., Pittsburg, Pa. Business-directory board	May 22, 1877	11	880
	Thornton & Co., John. (*See* Fenton, James, assignor.)			
9,709	Tiemann, John W., W. Simpson, jr., and J. Collins, Darlington, N. J., assignors to Hopkins & Dickinson Manufacturing Company, New York, N. Y. Ornamenting bronze	Jan. 16, 1877	11	70
9,743	Troemner, Frederick W., Philadelphia, Pa. Base for counter-scales	Feb. 13, 1877	11	251
10,137	Tufts, James W., Medford, Mass. Casing of soda-water apparatus	July 31, 1877	11	190
9,769	Tweddale, William, assignor to North American Iron Works, Brooklyn, N. Y. Vase	Feb. 20, 1877	11	332
10,155	Same.....Iron gate and rail	Aug. 14, 1877	12	270
	Union India Rubber Company. (*See* Olmstead, John A., assignor.)			
9,726	Uster, Cornelius, assignor to S. Sanford, Amsterdam, N. Y. Carpet	Jan. 30, 1877	11	154

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No.	Name, residence, and design.	Date.	Official Gazette. Vol.	Page.
9,727	Uster, Cornelius, assignor to S. Sanford, Amsterdam, N. Y. Carpet	Jan. 30, 1877	11	154
9,728	Same.....same	Jan. 30, 1877	11	154
10,172	Same.....same	Aug. 28, 1877	12	354
	Vedder, N. S. (*See* Vedder & Heister, assignors.)			
9,691	Vedder, Nicholas S., Troy, and T. S. Heister, Lansingburg, assignors to N. S. Vedder, Troy, N. Y. Box-stove	Jan. 2, 1877	11	6
9,738	Vedder, Nicholas S., and F. Ritchie, assignors to N. S. Vedder, Troy, N. Y. Heating-stove	Feb. 6, 1877	11	198
10,027	Vedder, Nicholas S., and F. Ritchie, Troy, N. Y., assignors to R. Wheeler, Utica, N. Y. Cook-stove	May 29, 1877	11	927
10,248	Vedder, Nicholas S., Troy, and T. S. Heister, Lansingburg, assignors to Fuller, Warren & Co., Troy, N. Y. Cooking-range	Sept. 11, 1877	12	432
10,334	Vedder, Nicholas S., Troy, N. Y. Cooking-stove	Nov. 27, 1877	12	891
10,335	Vedder, Nicholas S., Troy, and T. S. Heister, Lansingburg, N. Y., assignors to said Vedder. Cooking-stove	Nov. 27, 1877	12	891
10,342	Vedder, Nicholas S., Troy, N. Y. Box-stove	Dec. 11, 1877	12	981
10,343	Vedder, Nicholas S., Troy, and T. S. Heister, Lansingburg, N. Y., assignors to said Vedder. Franklin stove	Dec. 11, 1877	12	982
10,344	Same.....Cooking-range	Dec. 11, 1877	12	982
10,345	Vedder, Nicholas S., and F. Ritchie, Troy, and T. S. Heister, Lansingburg, N. Y., assignors to said Vedder. Parlor-stove	Dec. 11, 1877	12	982
10,358	Vedder, Nicholas S., Troy, and T. S. Heister, Lansingburg, N. Y., assignors to said Vedder. Base-burning stove	Dec. 18, 1877	12	1027
10,359	Same.....same	Dec. 18, 1877	12	1027
10,360	Same.....same	Dec. 18, 1877	12	1027
	Wade, William H., *et al.* (*See* Heckmann, Louis, assignor.)			
9,898	Walton, William A., assignor to Weybosset Mills, Providence, R. I. Fancy cassimere	Apr. 10, 1877	11	601
10,322	Webb, Charles J and Richard T., Randallstown, Ireland. Towel, &c.	Nov. 20, 1877	12	843
	Webb, Richard T. (*See* Webb, Charles J. and Richard T.)			
9,856	Webb, Richard T., Randallstown, Ireland. Woven border for towels, &c.	Mar. 13, 1877	11	421
9,899	Same.....same	Apr. 10, 1877	11	601
9,947	Same.....Woven border for the ends of towels, &c	Apr. 24, 1877	11	690
9,954	Same.....Woven border for the ends of towels	May 1, 1877	11	742
10,314	Same.....Woven border for towels	Nov. 13, 1877	12	798
	Webster & Bro. (*See* Miller, Watson J., assignor.)			
9,900	Weeden, William B., assignor to Weybosset Mills, Providence, R. I. Fancy cassimere	Apr. 10, 1877	11	601
9,901	Same.....same	Apr. 10, 1877	11	601
10,087	Same.....Cassimere	July 3, 1877	12	8
9,710	Weill, Solomon, New York, N. Y. Shirt-front	Jan. 16, 1877	11	70
9,716	Werner, Robert, Hoboken, N. J. Skirt-protector	Jan. 23, 1877	11	113
10,062	Same.....Trimming	June 19, 1877	11	1062
	Weybosset Mills. (*See* Bosworth, Frederick S., assignor.)			
	Same.....(*See* Walton, William A., assignor.)			
	Same.....(*See* Weeden, William B., assignor.)			
10,232	Whalen, James A., New York, N. Y. Handle for table-ware	Sept. 4, 1877	12	396
	Wheeler, Parsons & Hayes. (*See* Beam, Daniel A., assignor.)			
	Wheeler, Russell. (*See* Vedder & Ritchie, assignors.)			
10,028	White, Joseph C. New York, N. Y. Show-card	May 29, 1877	11	927
	Widmayer, Louis. (*See* Fracker & Widmayer.)			
10,029	Widmayer, Louis, assignor to P. and F. Corbin, New Britain, Conn. Door-knob	May 29, 1877	11	927
10,007	Wilkinson, William, assignor to C. B. Porter & Co., Philadelphia, Pa. Sheet-metal box	May 22, 1877	11	880
	Wilson & Fenimores. (*See* Dresser, Christopher, assignor.)			
10,269	Wilson, William C. and T. S. Harrison, Philadelphia, Pa. Show-card	Oct. 2, 1877	12	5
10,008	Wirz, August H., Philadelphia, Pa. Caster	May 22, 1877	11	880
	Wood, Jeremiah H. (*See* Mulligan & Wood.)			
10,054	Wood, Rosto O., Buffalo, N. Y. Badge	June 12, 1877	11	1012
9,955	Woods, Henry W., Brooklyn, N. Y. Necklace	May 1, 1877	11	742
9,717	Worsley, Thomas, Philadelphia, Pa. Cake of soap	Jan. 23, 1877	11	113
	Young, James H. (*See* Dunworth, Young & Dunworth.)			
10,254	Zimmerman, Paul, Pittsburg, Pa. Lamp chimney or globe	Sept. 18, 1877	12	478

LIST OF TRADE-MARKS REGISTERED DURING THE YEAR 1877.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
5,207	Abbey & Imbrie, New York, N. Y., and Redditch, England. Fishing-tackle	Oct. 16, 1877	12	627
4,758	Abbey & Son, S., Kingston, N. Y. Salt	June 26, 1877	11	1114
4,433	Adams & Shaw Company, New York, N. Y. Silver and plated ware	Mar. 6, 1877	11	377
5,094	Adams, Jacob M., Saratoga Springs, N. Y. Medicinal waters	Aug. 28, 1877	12	354
5,310	Allan Hay Company, New York, N. Y. Toilet-soap	Nov. 13, 1877	12	798
5,311	Same.....same	Nov. 13, 1877	12	798
4,656	Allen & Co., New York, N. Y. Plug-tobacco	May 22, 1877	11	880
4,641	Almirall, Joseph, J., Brooklyn, N. Y. Manufactured tobacco	May 15, 1877	11	834
5,177	Am Ende, Charles G., Hoboken, N. J. Food-preserving compound	Sept. 25, 1877	12	520
5,428	American Grape Sugar Company, Buffalo, N. Y. Starch, glucose, grape-sugar, and grape-sirup	Dec. 18, 1877	12	1027
4,326	American Lye Company, Philadelphia, Pa. Baking-powder	Jan. 30, 1877	11	155
4,722	Ames & Sons Corporation, Oliver, North Easton, Mass. Shovels, spades, and scoops	June 12, 1877	11	1012
4,723	Same.....same	June 12, 1877	11	1012
4,724	Same.....same	June 12, 1877	11	1012
4,725	Same.....same	June 12, 1877	11	1012
4,726	Same.....same	June 12, 1877	11	1012
5,185	Ames Plow Company, Boston, Mass., and New York, N. Y. Plow	Oct. 2, 1877	12	5
4,415	Amoskeag Manufacturing Company, Manchester, N. H. Cotton fabrics	Mar. 6, 1877	11	376
5,326	Anchor White Lead Company, Cincinnati, Ohio. White lead	Nov. 20, 1877	12	843
4,885	Anderson, Abraham, Camden, N. J. Canned tomatoes	July 17, 1877	11	95
4,543	Angell, Albert, East Orange, N. J. Croquet apparatus	Apr. 17, 1877	11	642
4,623	Anheuser Company's Brewing Association, E., Saint Louis, Mo. Lager-beer	May 8, 1877	11	791
4,247	Anthony & Co., J. B., Troy, N. Y. Baking-powder	Jan. 2, 1877	11	6
5,445	Apollinarisbrunnen, Actiengesellschaft, Neuenahr, Prussia. Mineral-water	Dec. 18, 1877	12	1028
	Arnold & Co., F. R. (*See* Howard, Sanger & Co., assignors.)			
4,511	Arrington & Sons, John, Petersburg, Va. Fertilizer	Apr. 3, 1877	11	555
4,512	Same.....same	Apr. 3, 1877	11	555
4,922	Aschermann & Co., Ed., Milwaukee, Wis. Cigars	July 24, 1877	12	139
4,685	Ashley, Silas E., New Bedford, Mass. Medicinal preparation	May 29, 1877	11	927
5,072	Atwood, Henry D., Taunton, Mass. Stove-polish	Aug. 21, 1877	12	314
5,132	Same.....same	Sept. 11, 1877	12	432
4,248	Atwood, Porter C., Philadelphia, Pa. Illuminating-oil	Jan. 2, 1877	11	6
4,293	Babbitt, Benjamin T., New York, N. Y. Toilet-soap	Jan. 23, 1877	11	113
5,228	Same.....Medicinal saleratus	Oct. 16, 1877	12	627
5,229	Same.....Caustic potash	Oct. 16, 1877	12	627
5,230	Same.....Laundry hard-soap	Oct. 16, 1877	12	627
5,231	Same.....Saleratus	Oct. 16, 1877	12	627
5,232	Same.....Borax soap-powder	Oct. 16, 1877	12	627
5,233	Same.....Yeast-powder	Oct. 16, 1877	12	627
4,759	Badger, Gardner F., East Orange, N. J. Medicinal preparation	June 26, 1877	11	1114
5,200	Baker, Winfield S., Brighton Park, Ill. Cotton carpet-warp	Oct. 9, 1877	12	36
4,618	Baldwin & Co., New York, N. Y. Fertilizers	May 8, 1877	11	791
5,314	Balfour, Guthrie & Co., San Francisco, Cal. Salt	Nov. 13, 1877	12	798
5,429	Barber Match Company, Akron, Ohio. Friction-matches	Dec. 18, 1877	12	1027
4,657	Barbour, Thomas, Paterson, N. J. Flax thread	May 22, 1877	11	880
4,961	Same.....Flax threads and twines	July 31, 1877	12	190
4,266	Barclay & Hasson, Baltimore, Md. Roasted and ground coffee	Jan. 16, 1877	11	70
4,451	Barclay, George C., Brooklyn, N. Y. Medical compound	Mar. 20, 1877	11	460
4,642	Same.....same	May 15, 1877	11	834
4,986	Barkley & Hasson, Baltimore, Md. Roasted and ground coffee	Aug. 7, 1877	12	229
4,987	Same.....same	Aug. 7, 1877	12	229
5,389	Barnes, Bancroft & Co., Buffalo, N. Y. Woolen yarns	Dec. 4, 1877	12	942
4,330	Barney, Everett H., Springfield, Mass. Skates	Feb. 6, 1877	11	198
4,331	Same.....same	Feb. 6, 1877	11	198
4,413	Bartlet & Co., William W., Boston, Mass. Medical compound	Mar. 6, 1877	11	376
4,988	Bates, Carlton J., Chester, Conn. Bone and ivory articles	Aug. 7, 1877	12	229
4,658	Bauer, Tobriner & Co., San Francisco, Cal. Zephyr-wool	May 22, 1877	11	880
4,452	Baum Brothers, Chicago, Ill. Cigars	Mar. 20, 1877	11	460
4,353	Baxter, Edward, Cold Spring, N. Y. Liquid stove-blacking	Feb. 13, 1877	11	251
4,760	Bay State Shoe and Leather Company, New York, N. Y. Boots and shoes	June 26, 1877	11	1114
5,085	Beck & Feldcamp, Chicago, Ill. Smoking and chewing tobacco	Aug. 28, 1877	12	354
5,086	Same.....Smoking-tobacco	Aug. 28, 1877	12	354
5,401	Becker Brothers, Baltimore, Md. Leaf-tobacco	Dec. 4, 1877	12	943
5,282	Becker, David E., Easton, Pa. Medical compound	Oct. 30, 1877	12	717
5,021	Beckman, Benjamin F., Westfield, Mass. Cigars	Aug. 14, 1877	12	270
5,035	Bedford Alum and Iodine Springs Company, New London and Lynchburg, Va. Mineral water and mass	Aug. 14, 1877	12	270
4,453	Bell & Co., R. W., Buffalo, N. Y. Soap	Mar. 20, 1877	11	460
4,454	Same.....same	Mar. 20, 1877	11	460
4,514	Same.....same	Apr. 3, 1877	11	555
5,452	Benjamin, Meyer H., New York, N. Y. Cigars	Dec. 25, 1877	12	1078
4,544	Benton & Co., E. J., Homerville, Ga. Medical compound	Apr. 17, 1877	11	642
5,162	Berteaux & Radou, Charles, New York, N. Y., and Paris, France. Tonic or cordial	Sept. 25, 1877	12	519
5,109	Betaux, Eugene L., San Francisco Cal. Stomach-bitters	Sept. 4, 1877	12	396
4,397	Biddle, Thomas M., Fort Wayne, Ind. Perfume	Feb. 27, 1877	11	332
4,686	Biechele, Joseph, Canton, Ohio. Laundry-soap	May 29, 1877	11	927
5,446	Binghamton Oil Refining Company, Binghamton, N. Y. Product of petroleum oil	Dec. 18, 1877	12	1028
4,564	Blair & Co., Hall, Brooklyn, N. Y. Cigars	Apr. 17, 1877	11	643
4,659	Blakely, John, Jersey City, N. J. Cigars, cigarettes, and cheroots	May 22, 1877	11	880
5,201	Blanchard Food Cure Company, New York, N. Y. Concentrated extract of meat, &c.	Oct. 9, 1877	12	36
5,600	Blankman, Julia, New York, N. Y. Remedial agent	May 1, 1877	11	743
4,513	Boca Brewing Company, San Francisco, Cal. Lager beer	Apr. 3, 1877	11	555
5,020	Bogle & Lyles, New York, N. Y. Oatmeal, cracked wheat, hominy, and samp	Aug. 14, 1877	12	270
4,990	Bolen & Byrne, New York, N. Y. Tonic beverages	Aug. 7, 1877	12	230
5,010	Boston Rubber Shoe Company, Malden and Boston, Mass. Rubber boots	Aug. 7, 1877	12	230

List of trade-marks registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
5,208	Bothin, Henry E., San Francisco, Cal. Yeast-powders	Oct. 16, 1877	12	627
4,694	Bowen & Cunningham, Leavenworth, Kans. Soap	June 5, 1877	11	973
5,202	Bowker, Horace L., Boston, Mass. Soda-water and aerated beverages	Oct. 9, 1877	12	36
4,660	Boykin, Carmer & Co., Baltimore, Md. Fertilizing compound	May 22, 1877	11	880
5,203	Boyle, James O., Boston, Mass. Spiced food for horses and cattle	Oct. 9, 1877	12	36
5,036	Brainerd, Armstrong & Co., New York, N. Y. Ribbons and binding or braid	Aug. 14, 1877	12	270
4,661	Bramhall, Edmund J., Jersey City, N. J. Cement	May 22, 1877	11	880
4,662	Same.....Corn and bunion cure	May 22, 1877	11	880
4,569	Brooke, Nathan, Philadelphia, Pa. Flour	Apr. 24, 1877	11	691
4,570	Same.....same	Apr. 24, 1877	11	691
4,727	Same.....same	June 12, 1877	11	1012
4,864	Same.....same	July 17, 1877	12	96
4,545	Brooks, Abel E., Windham, Conn. Tobacco and cigars	Apr. 17, 1877	11	642
4,378	Brown & Brothers, Waterbury, Conn., and New York, N. Y. Rivets and rivet-bars	Feb. 20, 1877	11	291
	Brown & Co., B. F. (*See* Reed & Sons, G. H., assignors.)			
4,354	Brown & Co., D. Arthur, Fishersville, N. H. Wagon-axles	Feb. 13, 1877	11	251
4,989	Brown, Nathaniel K., Burlington, Vt. Medical preparation	Aug. 7, 1877	12	230
4,761	Brown, Robert C., New York, N. Y. Cigars, cigarros, and cigarettes	June 26, 1877	11	1114
5,163	Brownfield, William W., Saint Louis, Mo. Chill and fever pills	Sept. 25, 1877	12	519
4,256	Brush & Co., E. F., Paterson, N. J., and New York, N. Y. Medical preparation	Jan. 9, 1877	11	40
4,248	Buchanan & Lyall, New York, N. Y. Plug-tobacco	Jan. 2, 1877	11	6
4,839	Same.....same	July 17, 1877	12	95
4,933	Same.....Chewing and smoking tobacco	July 24, 1877	12	139
4,934	Same.....same	July 24, 1877	12	139
4,935	Same.....same	July 24, 1877	12	139
4,840	Burdsal, J. S., Cincinnati, Ohio. Preparation for destroying rats, roaches, ants, &c	July 17, 1877	12	95
4,546	Burger, Henry E., Brooklyn, N. Y. Soap	Apr. 17, 1877	11	642
5,260	Same.....Household and laundry soap	Oct. 23, 1877	12	669
5,164	Burgess, Edgar C., Weissport, Pa. Emery wheels, and grinding machinery in which they are used	Sept. 25, 1877	12	519
4,435	Burnett, Joseph, Boston, Mass. Liquid cosmetic	Mar. 13, 1877	11	421
4,962	Burnham & Morrill, Portland, Me. Canned lobsters	July 31, 1877	12	190
4,841	Burrell, Thomas, and R. Smith, Fall River, Mass. Chemical composition for use with sizing for warps	July 17, 1877	12	95
5,022	Bush, James P., Boston, Mass. Concentrated beef-juice	Aug. 14, 1877	12	270
4,834	Bussing & Haddon, New York, N. Y. Concentrated or condensed lemonade	July 10, 1877	12	54
4,398	Busteed, George J., New York, N. Y. Veterinary medicines	Feb. 27, 1877	11	332
4,571	Butler, William A., New York, N. Y. Safety-pins	Apr. 24, 1877	11	691
4,495	Campbell, W. H. W., Norwich, Conn. Apparatus and materials for multiplying copies of writings, &c	Mar. 27, 1877	11	501
4,547	Canfield, S. W., Piermont, N. Y. Purified and condensed milk	Apr. 17, 1877	11	642
4,572	Same.....same	Apr. 24, 1877	11	691
5,303	Carman, Myron A., Canandaigua, N. Y. Dentifrice	Nov. 13, 1877	12	798
4,379	Carnrick, John, Bayonne, N. J. Medical preparation	Feb. 20, 1877	11	291
4,480	Same.....Medical compound	Mar. 27, 1877	11	504
4,795	Carr & Hobson, New York, N. Y., and Clintonville, Conn. Lawn-mower	July 3, 1877	12	8
4,573	Caswell, Hazard & Co., New York, N. Y., and Newport, R. I. Olive-oil	Apr. 24, 1877	11	691
4,873	Caswell, Hazard & Co., New York, N. Y. Preparation for the hair	July 17, 1877	11	96
4,874	Same.....Drugs and medicines	July 17, 1877	11	96
4,875	Same.....Cologne water	July 17, 1877	11	96
4,876	Same.....Cod-liver oil	July 17, 1877	11	96
4,877	Same.....Preparation for the hair	July 17, 1877	11	96
4,257	Catron, Alfred G., Chattanooga, Tenn. Medical compound	Jan. 9, 1877	11	40
4,267	Cazade, Crooks & Raynaud, New York, N. Y. Lard	Jan. 16, 1877	11	71
4,912	Cereals Manufacturing Company, New York, N. Y. Cereals	July 17, 1877	12	97
4,842	Chadwick & Co., J. H., Boston, Mass. White paint	July 17, 1877	12	95
4,355	Chamberlin, Edward K., Cleveland, Ohio. Lubricating-oil	Feb. 13, 1877	11	251
5,420	Chapin, William H. D., Corry, Pa. Lubricating-oil	Dec. 11, 1877	12	982
5,045	Charles, Albion P., Knoxville, Ill. Hog-cholera medicine	Aug. 14, 1877	12	270
4,663	Chase, Son & Co., A. W., Toledo, Ohio. Medicines	May 22, 1877	11	880
5,049	Same.....Liver-pills	Aug. 21, 1877	12	313
5,023	Chatillon & Sons, John, New York, N. Y. Scales	Aug. 14, 1877	12	270
4,881	Cherry, O'Connor & Co., Nashville, Tenn. Road-wagons	July 17, 1877	11	96
4,400	Chester & Co., William E., Montreal, Canada, and Boston, Mass. Medical compound	Feb. 27, 1877	11	332
5,063	Chicago Starch Works, Chicago, Ill. Corn-starch	Aug. 21, 1877	12	314
5,145	Same.....Starch	Sept. 11, 1877	12	432
4,332	Chicago White Lead and Oil Company, Chicago, Ill. Zinc white-lead	Feb. 6, 1877	11	198
4,333	Same.....White lead	Feb. 6, 1877	11	198
4,334	Same.....same	Feb. 6, 1877	11	198
4,335	Same.....same	Feb. 6, 1877	11	198
4,336	Same.....same	Feb. 6, 1877	11	198
4,337	Same.....same	Feb. 6, 1877	11	198
4,338	Same.....same	Feb. 6, 1877	11	198
4,339	Same.....same	Feb. 6, 1877	11	198
4,340	Same.....Green paint	Feb. 6, 1877	11	198
4,341	Same.....same	Feb. 6, 1877	11	198
4,342	Same.....White lead	Feb. 6, 1877	11	199
4,409	Same.....Putty	Feb. 27, 1877	11	332
4,410	Same.....same	Feb. 27, 1877	11	332
5,037	City Button Works, New York, N. Y. Buttons	Aug. 14, 1877	12	270
4,496	Clark, Cook & Co., Tecoma, Nev. Liniment	Mar. 27, 1877	11	504
4,294	Clark, George, New York, N. Y. Bitters	Jan. 23, 1877	11	113
4,455	Clay & Co., H. C., Paris, Ky. Whisky	Mar. 20, 1877	11	460
5,038	Clayton, Virginius C., New York, N. Y. Playing-cards	Aug. 14, 1877	12	270
4,695	Cleveland Axle Manufacturing Company, Cleveland, Ohio. Carriage-axles	June 5, 1877	11	973
4,687	Cleveland Collar Company, Cleveland, Ohio. Paper collar	May 28, 1877	11	927
4,865	Same.....same	July 17, 1877	11	96
4,866	Same.....same	July 17, 1877	11	96
4,867	Same.....same	July 17, 1877	11	96
5,209	Same.....same	Oct. 16, 1877	12	627
5,120	Coaney, George D., Bayonne, N. J. Pills for biliousness, constipation, &c	Sept. 4, 1877	12	397
5,014	Co. Fermiere of the Thermal Establishment of Vichy, Vichy, France. Mineral waters and salts	Aug. 7, 1877	12	230
4,602	Coffield, Eugene M., Philadelphia, Pa. Cleansing preparation	May 1, 1877	11	743
5,372	Cohn, Louis, Chicago, Ill. Cigars	Nov. 27, 1877	12	891
5,150	Colby, Hutchins & Co., Cincinnati, Ohio. Sewing-machine oil	Sept. 18, 1877	12	478
5,448	Collins Company, Collinsville, Conn. Agricultural implements and machines	Dec. 18, 1877	12	1028
5,449	Same.....same	Dec. 18, 1877	12	1028

List of trade-marks registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
4,399	Comstock, Castle & Co., Quincy, Ill. Stove	Feb. 27, 1877	11	332
4,370	Condimental Food Company, Philadelphia, Pa. Food for horses, cattle, poultry, and stock generally.	Feb. 13, 1877	11	251
4,280	Congress and Empire Spring Company, Saratoga Springs, N. Y. Waters for medicinal purposes	Jan. 16, 1877	11	71
4,281	Same.....same	Jan. 16, 1877	11	71
4,282	Same.....same	Jan. 16, 1877	11	71
4,283	Same.....same	Jan. 16, 1877	11	71
5,402	Connell, John M., Boston, Mass. Medical compound	Dec. 11, 1877	12	982
5,110	Connelly, Azariah, New York, N. Y. Hair-dye	Sept. 4, 1877	12	396
4,477	Conrad, Charles H., Danville, Va. Smoking-tobacco	Mar. 27, 1877	11	504
4,478	Same.....same	Mar. 27, 1877	11	504
4,371	Consolidated Wax Thread Sewing Machine Company, Boston, Mass. Wax-thread sewing-machine	Feb. 13, 1877	11	251
4,515	Constable & Co., Philadelphia, Pa. Butter	Apr. 3, 1877	11	555
4,603	Cook & Co., Isaac Boston, Mass. Ale	May 1, 1877	11	743
4,991	Cooke & Co., Washington, D. C., and Philadelphia, Pa. Medical compound	Aug. 7, 1877	12	230
4,905	Cooley, Martin I., Plainfield, N. J. Corsets	July 17, 1877	12	77
4,845	Cornwall & Brother, Louisville, Ky. Soap	July 10, 1877	12	54
4,868	Same.....same	July 17, 1877	11	96
4,380	Coryell & Russ, Saint Mary's, Pa. Soap	Feb. 20, 1877	11	291
4,381	Cotter & Co., R., Houston, Tex. Medicinal preparations	Feb. 20, 1877	11	291
5,166	Cotterill, Fenner & Co., Dayton, Ohio. Fine-cut chewing-tobacco	Sept. 25, 1877	12	519
5,046	Counselman, Lawrence W., Baltimore, Md. Hermetically-sealed oysters, vegetables, and fruits	Aug. 14, 1877	12	270
4,456	Coussens & Tabler, Nashville, Tenn. Medical compound	Mar. 20, 1877	11	460
4,479	Same.....same	Mar. 27, 1877	11	504
4,904	Same.....same	July 17, 1877	12	97
5,373	Crane & Co., Dalton, Mass. Paper	Nov. 27, 1877	12	891
4,916	Crawford, Andrew J., New York, N. Y. Cigars	July 17, 1877	12	97
5,601	Crawley, Andrew T., Chelsea, Mass. Soap	May 1, 1877	11	743
4,785	Crooks & Hatcher, Zanesville, Ohio. Deodorizing and disinfectant preparation	June 26, 1877	11	1114
5,374	Crossman & Brother, W. H., New York, N. Y. Petroleum	Nov. 27, 1877	12	891
5,375	Same.....same	Nov. 27, 1877	12	891
5,450	Same.....Refined petroleum	Dec. 18, 1877	12	1027
4,818	Curran, Theodore, Newark, N. J. Soap	July 3, 1877	12	8
4,819	Same.....Medical compound	July 3, 1877	12	8
5,165	Curtis & Sons, Jeremiah, New York, N. Y. Medicinal preparation	Sept. 25, 1877	12	519
4,457	Cusenier Fils Aine & Co., E., Paris and Ornans, France. Liquors and spirits	Mar. 20, 1877	11	460
4,458	Same.....same	Mar. 20, 1877	11	460
4,762	Dailey, Parley A., Brooklyn, N. Y. Brooms	June 26, 1877	11	1114
4,832	Dales, George, Bloomville, N. Y. Salve	July 3, 1877	12	9
4,295	Dambmann, Gustav, Baltimore, Md. Fertilizer	Jan. 23, 1877	11	113
4,382	Same.....same	Feb. 20, 1877	11	291
4,481	Daniels & Co., D. D., New York, N. Y. Medical compound	Mar. 27, 1877	11	504
5,240	Darier, de Rouffia & Co., Marseilles, France. Castile soap	Oct. 16, 1877	12	628
4,584	Dausman & Drummond Tobacco Company, Alton, Ill. Plug chewing-tobacco	Apr. 24, 1877	11	691
4,705	Same.....same	June 5, 1877	11	973
4,713	Same.....same	June 12, 1877	11	1012
5,339	Same.....same	Nov. 20, 1877	12	844
4,763	Davies, Henry J., Brooklyn, N. Y. Alarm-clock	June 26, 1877	11	1114
4,796	Davies, Richard O., Trenton, N. J. Shirt fronts or bosoms	July 3, 1877	12	8
5,210	Davis & Co., Curtis, Boston and Cambridge, Mass. Soap	Oct. 16, 1877	12	627
5,284	Davis & Co., S. H., Detroit, Mich. Packages of fresh fish	Oct. 30, 1877	12	717
5,024	Davis & Haydock, New York, N. Y. Medical compound	Aug. 14, 1877	12	270
4,870	Davis & Son, James L., New York, N. Y. Cigars	July 17, 1877	11	96
5,095	Davis, James M., Bergen Point, N. J. Cigars, cigarettes, smoking and chewing tobacco	Aug. 28, 1877	12	354
5,362	Same.....Cigars	Nov. 27, 1877	12	891
5,363	Same.....same	Nov. 27, 1877	12	891
5,364	Same.....same	Nov. 27, 1877	12	891
4,606	Davis, Sacker & Perkins, Boston, Mass. Coffee	May 1, 1877	11	743
5,293	Day & Frick, Philadelphia, Pa. Soap	Nov. 6, 1877	12	757
5,403	Same.....same	Dec. 11, 1877	12	982
5,444	Same.....same	Dec. 18, 1877	12	1028
4,459	De Barry & Co., Frederick, New York, N. Y. Champagne wine	Mar. 20, 1877	11	461
4,604	De Castro & Donner Sugar Refining Company, New York, N. Y. Sugar, molasses, and sirup	May 1, 1877	11	743
4,605	Same.....same	May 1, 1877	11	743
4,992	De Forest, David W., Brooklyn, N. Y. Cigars, cigarettes, and cheroots	Aug. 7, 1877	12	230
4,574	Delacre, Charles, Brussels, Belgium. Extract of beef compounds	Apr. 24, 1877	11	691
4,416	De Luze & Fils, A., Bordeaux, France. Wines and brandies	Mar. 6, 1877	11	376
4,516	Demuth, William, New York, N. Y. Tobacco-pipe stem	Apr. 3, 1877	11	555
4,497	Derby & Co., H. C., New York, N. Y. Tongues, tripe, and pigs' feet	Mar. 27, 1877	11	504
5,050	Dessauer & Co., L., Fort Wayne, Ind. Cigar	Aug. 21, 1877	12	314
4,964	Detroit Stove Works, Detroit, Mich. Stove-castings	July 31, 1877	12	190
4,417	Dick, Dundas, New York, N. Y. Medical preparation	Mar. 6, 1877	11	376
4,714	Same.....Medical compound	June 12, 1877	11	1012
4,728	Same.....Medicines inclosed in capsules	June 12, 1877	11	1012
4,917	Same.....Medicines put up in capsules	July 17, 1877	12	97
5,404	Same.....Medicinal preparation	Dec. 11, 1877	12	982
5,186	Dick, Robert G., Flatbush, N. Y. Capsules	Oct. 2, 1877	12	5
5,275	Dietz, A. C., San Francisco, Cal. Kerosene-oil	Oct. 30, 1877	12	717
4,296	Dill, Joseph G., Richmond, Va. Plug-tobacco	Jan. 23, 1877	11	113
5,039	Dithridge, E. D., Allegheny, Pa. Glassware	Aug. 14, 1877	12	270
4,635	Dixon Crucible Company, Joseph, Jersey City, N. J. Pens, pencils, pen-holders, and rubber erasers	May 15, 1877	11	834
4,636	Same.....same	May 15, 1877	11	834
5,197	Same.....Stove-polish	Oct. 2, 1877	12	6
5,198	Same.....same	Oct. 2, 1877	12	6
4,612	Dohan, Carroll & Co., New York, N. Y. Manufactured tobacco and snuff	May 1, 1877	11	743
5,327	Dooley Manufacturing Company, Boston, Mass. Machine for cutting paper, linen, cloth, &c.	Nov. 20, 1877	12	843
4,965	Dornbusch, Philipp, Nashville, Tenn. Aromatic beverages	July 31, 1877	12	190
	Doubleday, E. M. (*See* Dunlop & Doubleday.)			
4,886	Dougherty, Andrew, Brooklyn, N. Y. Playing-cards	July 17, 1877	11	96
4,843	Dougherty, Michael J., Pittsburg, Pa. Cigars	July 17, 1877	12	95
4,826	Douglas & Co, Richard, New York, N. Y. Lamp-shade holders	July 3, 1877	12	9
4,436	Dreydoppel, William, Philadelphia, Pa. Soap	Mar. 13, 1877	11	421
4,963	Dreyfuss & Sachs, New York, N. Y. Perforated card-board	July 31, 1877	12	190
4,993	Duffour, Felix, New Orleans, La. Prepared moss	Aug. 7, 1877	12	230

List of trade-marks registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
4,688	Dunham, Peckham & Co., Saint Louis, Mo. Baking-powder	May 28, 1877	11	927
4,833	Dunkinson & Co., F. H., New York, N. Y. Writing-paper	July 3, 1877	12	9
4,643	Dunlop, Isabella, and E. M. Doubleday, Brooklyn, N. Y. Specific for skin-diseases	May 15, 1877	11	834
5,178	Dunn, John, Oswego, N. Y. Flour	Sept. 25, 1877	12	520
5,304	Duprez Et Cie, C., Rheims, France. Grain-cleaning machinery	Nov. 13, 1877	12	798
4,869	Durfee, George B., Fall River, Mass. Shirtings	July 17, 1877	11	96
4,689	Durner & Co., M., Cincinnati, Ohio. Whisky	May 28, 1877	11	927
5,355	Eagle Machine Works, Indianapolis, Ind. Thrashing machine and separators	Nov. 20, 1877	12	841
5,040	Eagle Pencil Company, New York, N. Y. Lead-pencils	Aug. 14, 1877	12	270
5,262	Same.....same	Oct. 23, 1877	12	670
5,305	Same.....same	Nov. 13, 1877	12	798
4,720	Earl & Gamage, Boston, Mass. Medicinal spring-water	June 12, 1877	11	1012
5,447	Earle, Cornelius, Allentown, Pa. Soap	Dec. 18, 1877	12	1078
4,460	Eastman, Robert, Philadelphia, Pa. Soap	Mar. 20, 1877	11	461
4,936	Eblen, Charles F., Saint Louis, Mo. Wines and spirituous liquors	July 24, 1877	12	139
4,906	Eckstein, Hill & Co., Cincinnati, Ohio. White lead	July 17, 1877	12	97
5,343	Edgerton Brothers, Wheeling, Mo. Cement for uniting wood, glass, china, leather &c	Nov. 20, 1877	12	841
5,453	Egersdorff, Theodore, Leavenworth, Kans. Dentifrice	Dec. 25, 1877	12	1078
4,644	Ehrich & Co., New York, N. Y. Piano	May 15, 1877	11	831
4,810	Elostein, Julius, New York, N. Y. Cotton-thread	Jan. 30, 1877	11	154
4,996	Eisner, Moritz, Philadelphia, Pa., and S. Mandel, New York, N. Y. Bitters	Aug. 7, 1877	12	230
4,895	Elgin Butter Company, Elgin, Ill. Butter	July 17, 1877	12	96
4,994	Elgin National Watch Company, Chicago, Ill. Watches	Aug. 7, 1877	12	230
4,995	Same.....same	Aug. 7, 1877	12	230
4,798	Ellison, O., Ironton, Ohio. Medicinal compound	July 3, 1877	12	8
4,797	Elstun, Orange & Co., Cincinnati, Ohio. Canned fruits and vegetables	July 3, 1877	12	8
4,836	Emerick, Albert C., Toledo, Ohio. Cleaning and polishing compound	July 10, 1877	12	54
4,887	Empire Mill Company, Saint Louis, Mo. Flour	July 17, 1877	11	96
4,645	English, Richard W., Buffalo, N. Y. Brooms	May 15, 1877	11	831
4,287	Erie Preserving Company, Brant, N. Y. Canned apples	Jan. 23, 1877	11	113
5,073	Eschenauer & Co., Bordeaux, France. Claret wine	Aug. 21, 1877	12	314
5,074	Same.....same	Aug. 21, 1877	12	314
5,075	Same.....same	Aug. 21, 1877	12	314
5,076	Same.....same	Aug. 21, 1877	12	314
5,077	Same.....same	Aug. 21, 1877	12	314
4,997	Estey & Co., J., Brattleborough, Vt. Reed-organs	Aug. 7, 1877	12	230
4,664	Excelsior Dairy Salt Company, Syracuse, N. Y. Salt	May 22, 1877	11	880
5,111	Faber, G. W., New York, N. Y. Cigars and cigarettes	Sept. 4, 1877	12	396
5,234	Fairbank Company, N. K., Chicago, Ill. Canned meats	Oct. 16, 1877	12	627
4,715	Fairbrother, Helen F., New Bedford, Mass. Ointment or salve	June 12, 1877	11	1012
4,756	Falk & Brother, G., assignors to D. Hirsch & Co., New York, N. Y. Cigars	June 19, 1877	11	1063
4,923	Fanning, David H., Worcester, Mass. Corsets	July 24, 1877	12	139
4,924	Same.....same	July 24, 1877	12	139
4,925	Same.....same	July 24, 1877	12	139
5,263	Farina, Johann M., Cologne, Germany. Cologne water	Oct. 23, 1877	12	670
5,264	Same.....same	Oct. 23, 1877	12	670
5,265	Same.....same	Oct. 23, 1877	12	670
4,646	Farmers' Friend Manufacturing Company, Dayton, Ohio. Grain-seeding machine	May 15, 1877	11	831
4,764	Same.....same	June 26, 1877	11	1114
4,907	Same.....same	July 17, 1877	12	97
5,015	Farmers' Fruit Preserving Company, Five Points, Del. Preserved fruits and vegetables	Aug. 7, 1877	12	230
5,179	Farwell & Co., John V., Chicago, Ill. Cotton flannel	Sept. 25, 1877	12	520
4,268	Fechheimer, Goodkind & Co., New York, N. Y. Gentlemen's furnishing-goods	Jan. 16, 1877	11	71
5,151	Fiegelstock, Alois, New York, N. Y. Sausages	Sept. 18, 1877	12	478
4,786	Felgner & Son, F. W., Baltimore, Md. Smoking-tobacco and cigarettes	June 26, 1877	11	1111
5,276	Ferris & Co., F. A., New York, N. Y. Smoked meats	Oct. 30, 1877	12	717
4,673	Field, Leiter & Co., Chicago, Ill. Cotton goods	May 22, 1877	11	880
4,871	Same.....Cotton flannel	July 17, 1877	11	96
5,454	Finney, Joseph R., Allegheny County, Pa. Dentifrice	Dec. 25, 1877	12	1078
4,374	Firm of J. A. Gilka, Berlin, Germany. Kümmel or cordial	Feb. 13, 1877	11	251
5,171	Firm of John Matthews, New York, N. Y. Carbonated beverages	Sept. 25, 1877	12	519
4,372	Firm of Maurice S. Esche, Chemnitz, Germany. Hosiery and gloves	Feb. 13, 1877	11	251
4,373	Same.....same	Feb. 13, 1877	11	251
4,327	Firm of Otto Radde, Hamburg, Germany. Pictures or representations of devices printed in colors	Jan. 30, 1877	11	155
4,251	Firm of William Krause, Philadelphia, Pa. Artificial stone and artificial stone pavement	Jan. 2, 1877	11	6
4,794	Same.....same	June 26, 1877	11	1115
5,212	Fischer, Philipp, Jersey City, N. J. Boots and shoes	Oct. 16, 1877	12	627
4,814	Fitler & Co., Edwin H., Philadelphia, Pa. Cordage	July 17, 1877	12	95
4,896	Fitts & Anstin, New York, N. Y. Baking-powder	July 17, 1877	12	96
4,549	Fitzgerald & Co., P. J., Philadelphia, Pa. Illuminating-oil	Apr. 17, 1877	11	642
5,078	Fitzpatrick, Davis & Co., Fisherton, Wash. Canned salmon	Aug. 21, 1877	12	314
4,401	Flagler, Harvey K., Boston, Mass. Horseshoe	Feb. 27, 1877	11	332
4,297	Fleischmann, Maximilian, Green Point, N. Y. Compressed yeast and bread and cake	Jan. 23, 1877	11	113
4,411	Flohr, Hymers & Co., Saint Louis, Mo. Confectionery	Feb. 27, 1877	11	333
4,765	Focht & Co., D, Philadelphia, Pa. Roasted coffee	June 26, 1877	11	1114
4,766	Same.....same	June 26, 1877	11	1114
4,356	Ford, Frederick A., Elizabeth, N. J. Cigar	Feb. 13, 1877	11	251
4,845	Same.....Cigars, cigarettes, smoking and chewing tobacco	June 17, 1877	12	95
4,620	Force & Co., Louisville, Ky. Plug-tobacco	May 8, 1877	11	791
4,298	Fortier, William R., Brooklyn, N. Y. Leaf-tobacco	Jan. 23, 1877	11	113
4,550	Foster, George F., Brooklyn, N. J. Spool-cotton	Apr. 17, 1877	11	642
4,551	Same.....same	Apr. 17, 1877	11	642
4,552	Same.....same	Apr. 17, 1877	11	642
4,730	Fougera, C. Edmond., Brooklyn, N. Y. Dentifrice	June 12, 1877	11	1012
5,016	Fowle, William B., Auburndale, Mass. Watches, chronometers, and timers	Aug. 7, 1877	12	230
4,498	Franck, Victorine, New York, N. Y. Toilet-powder	Mar. 27, 1877	11	564
4,352	Frank, Buchstein & Co., New York, N. Y. Compressed yeast	July 24, 1877	12	140
4,624	Frankfurth & Co., William, Milwaukee, Wis. Agricultural implements	May 15, 1877	11	834
4,888	Same.....Axes and saws	July 17, 1877	12	96
5,242	Franklin Jewelry Company, Philadelphia, Pa. Jewelry	Oct. 16, 1877	12	628
5,112	Freeman Manufacturing Company, North Adams, Mass. Calico-prints	Sept. 4, 1877	12	396
5,140	Freiberg, Klein & Co., Galveston, Tex. Cigars	Sept. 11, 1877	12	432
4,553	Friedman, Max, New York, N. Y. Cigarette	Apr. 17, 1877	11	642
5,096	Same.....Cigarettes	Aug. 28, 1877	12	354

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No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
5,285	Fritzsche Brothers, Hoboken, N. J., and New York, N. Y. Oil of peppermint	Oct. 30, 1877	12	717
4,311	Frost & Co., E. S., Biddeford, Me. Rug-pattern	Jan. 30, 1877	11	154
4,525	Frost, Edward J., Philadelphia, Pa. Collars and cuffs	Apr. 10, 1877	11	601
4,499	Fuchs, Gustav, New York, N. Y. Cigars	Mar. 27, 1877	11	505
5,211	Same.....Cigars, cigarettes, and smoking and chewing tobacco	Oct. 16, 1877	12	627
5,247	Same.....same	Oct. 23, 1877	12	669
4,767	Fuguet & Sons, S, Philadelphia, Pa. Cigars	June 26, 1877	11	1114
5,121	Same.....Cigars, cigarettes, cigarros, and smoking tobacco	Sept. 4, 1877	12	397
4,966	Funke, Hugo, College Point, N. Y. Silk ribbons	July 31, 1877	12	190
4,437	Furland & Co., L., Cognac, France. Brandy	Mar. 13, 1877	11	421
5,025	Gadd & Sadler, Sadlersville, Md. Canned fruits and vegetables	Aug. 14, 1877	12	270
4,647	Gail & Ax, G. W., Baltimore, Md. Manufactured tobacco	May 15, 1877	11	834
4,846	Same.....Smoking-tobacco	July 17, 1877	12	95
4,787	Galway & Casado, New York, and A. D. Shaw, New Brighton, N. Y. Ale	June 26, 1877	11	1115
5,350	Gamgee, John, Washington, D. C. Ice	Dec. 4, 1877	12	942
5,391	Same.....Railway-cars	Dec. 4, 1877	12	942
5,392	Same.....Artificial-ice chamber	Dec. 4, 1877	12	942
4,967	Garcia, Felix, New York, N. Y. Leaf-tobacco	July 31, 1877	12	190
4,418	Gardner, Joseph W., Shelburne Falls, Mass. Pocket and other knives	Mar. 6, 1877	11	376
4,269	Gardner, Stuart & Co., Pittsburg, Pa. Fire bricks and tile, and furnace-blocks made of fire-clay	Jan. 16, 1877	11	71
4,438	Gigault, Charles, Worcester, Mass. Medical compound	Mar. 13, 1877	11	421
4,698	Giles & Co, William W., New York, N. Y. Liniment	May 28, 1877	11	927
4,312	Gill, Thomas, Jersey City, N. J. Soap	Jan. 30, 1877	11	154
4,270	Gillet & Co., Martin, Baltimore, Md. Teas	Jan. 16, 1877	11	71
4,352	Gillott & Sons, Joseph, Birmingham, Great Britain, and New York, N. Y. Steel pen	Feb. 6, 1877	11	199
4,625	Gillott & Sons, Joseph, Birmingham, England, and New York, N. Y. Steel pens	May 15, 1877	11	834
5,204	Same.....same	Oct. 9, 1877	12	36
5,377	Githens & Rexsamer, Philadelphia, Pa. Canned goods	Nov. 27, 1877	12	891
5,079	Glaenzer & Co., J., New York, N. Y. Champagne and cognac	Aug. 21, 1877	12	314
4,621	Glen Cove Starch Manufacturing Company, Glen Cove, N. Y. Starch	May 8, 1877	11	791
4,622	Same.....same	May 8, 1877	11	791
4,937	Globe Nail Company, Boston, Mass. Horse and animal shoe nails	July 24, 1877	12	139
4,500	Glover, Samuel, and B. L. Budd, Fairfield, Conn. Gun and sporting implement	Mar. 27, 1877	11	505
5,376	Goodall, Thomas, Sanford, Me. Carriage-robes	Nov. 27, 1877	12	891
4,938	Goodwin & Co., New York, N. Y. Smoking-tobacco	July 24, 1877	12	139
4,939	Same.....same	July 24, 1877	12	139
5,286	Goodyear Rubber Company, New York, N. Y. India-rubber goods	Oct. 30, 1877	12	717
4,439	Gorden, John, San Francisco, Cal. Watches	Mar. 13, 1877	11	421
4,390	Gordon, Solomon J., New York, N. Y. Compound for packing joints of steam-engines and for other purposes	Feb. 20, 1877	11	291
5,432	Gorrell & Parkison, Ossian, Ind. Burning-fluid	Dec. 18, 1877	12	1027
4,461	Gowans & Co., Buffalo, N. Y. Soap	Mar. 20, 1877	11	461
4,554	Same.....same	Apr. 17, 1877	11	643
4,767	Graff, Lafe, New York, N. Y. Soap-making preparation	June 19, 1877	11	1063
4,768	Gravely, Benjamin F., Leatherwood, Va. Chewing-tobacco	June 26, 1877	11	1114
4,769	Same.....same	June 26, 1877	11	1114
5,406	Gray, Richard A., Covington, Ky. Pickles	Dec. 11, 1877	12	982
5,431	Green, Lucius, Durham, N. C. Smoking-tobacco	Dec. 18, 1877	12	1027
4,968	Greene, Lindley & Bentley, Cincinnati, Ohio. Medical compound	July 31, 1877	12	190
5,344	Greenfield & Son, Ernest. New York, N. Y. Candy	Nov. 20, 1877	12	844
4,770	Greenhall, Abraham, New York, N. Y. Cigars	June 26, 1877	11	1114
5,080	Grier, William W., Hulton, Pa. Vehicles and vehicle-springs	Aug. 21, 1877	12	315
5,026	Grindall, Joseph J., Baltimore, Md. Fluid medical compound	Aug. 14, 1877	12	270
5,405	Groves & Lowry, Eugene, Ind. Fever and ague pills	Dec. 11, 1877	12	982
5,296	Gutta Percha Paint Company, Cleveland, Ohio. Paint	Nov. 6, 1877	12	757
4,847	Haas Brothers, San Francisco, Cal., and New York, N. Y. Refined petroleum	July 17, 1877	12	95
4,848	Same.....same	July 17, 1877	12	95
4,900	Same.....Tea	July 17, 1877	12	97
4,901	Same.....Yeast-powder	July 17, 1877	12	97
4,902	Same.....Tea	July 17, 1877	12	97
5,407	Same.....Oysters	Dec. 11, 1877	12	982
4,626	Hadley Company, Boston, Mass. Thread	May 15, 1877	11	834
4,627	Same.....same	May 15, 1877	11	834
4,271	Hale, Joseph P., New York, N. Y. Piano-fortes	Jan. 16, 1877	11	71
5,249	Hall & Ruckel, New York, N. Y. Liquid dentifrice	Oct. 23, 1877	12	669
5,250	Same.....Prepared glue	Oct. 23, 1877	12	669
4,731	Hall, Thomas H., New York, N. Y. Cigarettes	June 12, 1877	11	1012
5,316	Hallidie, Andrew S., San Francisco, Cal. Manufactured wire in the coil	Nov. 13, 1877	12	799
5,433	Hamilton, Sylvester M., Saint Louis, Mo. Cotton yarn	Dec. 18, 1877	12	1027
5,421	Hanthorn & Co., J. O., Astoria, Oreg. Packed and preserved fish and meats	Dec. 11, 1877	12	982
4,648	Hantsch & Crouse, Reading, Pa. Cigars	May 15, 1877	11	834
4,357	Hapgood, John H., New York, N. Y. Ladies' boots and shoes	Feb. 13, 1877	11	251
5,267	Harbour, Esther J., Olive Hill, Tenn. Preserved meats and sausages	Oct. 23, 1877	12	670
4,462	Harrington, George, Springfield, Mass. Paper collars	Mar. 20, 1877	11	461
5,378	Harris, Beebe & Co., Quincy, Ill. Plug chewing-tobacco	Nov. 27, 1877	12	891
4,343	Harrison Brothers & Co., Philadelphia, Pa. Paints	Feb. 6, 1877	11	199
4,482	Same.....Liquid paint	Mar. 27, 1877	11	504
4,608	Same.....Paints	May 1, 1877	11	743
4,609	Same.....same	May 1, 1877	11	743
4,402	Hartmann Brothers, Belleville, Ill. Lager-beer	Feb. 27, 1877	11	332
5,379	Haslage, William, Pittsburg, Pa. Baking-powder	Nov. 27, 1877	12	891
5,317	Havemeyers & Elder, New York, N. Y. Sugars	Nov. 13, 1877	12	799
5,325	Same.....same	Nov. 13, 1877	12	799
5,416	Hawley, Charles J., San Francisco, Cal. Pulverized sugar	Dec. 11, 1877	12	982
5,294	Hazard & Co., E. C., New York, N. Y. Cigars, cigarettes, and smoking and chewing tobacco	Nov. 6, 1877	12	757
4,383	Heath & Milligan, Chicago, Ill. Paint	Feb. 20, 1877	11	291
4,384	Same.....White lead	Feb. 20, 1877	11	291
4,385	Same.....same	Feb. 20, 1877	11	291
4,386	Same.....Paints	Feb. 20, 1877	11	291
4,807	Same.....Prepared paints	July 3, 1877	12	8
5,051	Same.....same	Aug. 21, 1877	12	314
4,706	Heaton, Edward, New Haven, Conn. Medicinal food known as imperial grauum	June 5, 1877	11	973
4,707	Same.....same	June 5, 1877	11	973

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No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
5,393	Hegeman & Co., New York, N. Y. Medical preparations	Dec. 4, 1877	12	943
5,113	Heidsieck & Co., Rheims, France. Champagne wine	Sept. 4, 1877	12	396
5,114	Same.....same	Sept. 4, 1877	12	396
4,849	Heintzelman, J. A., Philadelphia, Pa. Medicinal compounds	July 17, 1877	12	95
5,277	Helmer, Nicolas, New York, N. Y. Hair goods	Oct. 30, 1877	12	717
4,272	Hendryx & Bartholomew, Ansonia, Conn. Bird-cage	Jan. 16, 1877	11	71
4,565	Henry, William W., Burlington, Vt. Bitters	Apr. 17, 1877	11	643
4,555	Hernsheim & Brother, S., New Orleans, La. Cigars	Apr. 17, 1877	11	643
5,328	Heublein & Brother, G. F., Hartford, Conn. Lager-beer	Nov. 20, 1877	12	843
5,268	Heuckendorff, Peter, New York, N. Y. Medicated pads for the cure of rheumatism	Oct. 23, 1877	12	670
5,122	Heyman Brothers & Lowenstein, New York, N. Y. Cigars	Sept. 4, 1877	12	397
4,665	Hill & Co., George D., Baltimore, Md. Ladies' and children's shoes	May 22, 1877	11	880
5,188	Same.....Shoe-dressing	Oct. 2, 1877	12	5
5,266	Hilson, Max, New York, N. Y. Cigars, cigarettes, and smoking and chewing tobacco	Oct. 23, 1877	12	670
5,365	Hilson, Edward, New York, N. Y. Cigars	Nov. 27, 1877	12	891
5,115	Himrod Manufacturing Company, New York, N. Y. Medical preparation	Sept. 4, 1877	12	396
5,187	Hinds, John, New York, N. Y. Gin	Oct. 2, 1877	12	5
	Hirsch & Co., D. (*See* Falk & Brother, G., assignors.)			
4,743	Hirsch & Co., David, New York, N. Y. Cigars	June 19, 1877	11	1063
4,744	Same.....same	June 19, 1877	11	1063
4,745	Same.....same	June 19, 1877	11	1063
4,746	Same.....same	June 19, 1877	11	1063
4,747	Same.....same	June 19, 1877	11	1063
4,748	Same.....same	June 19, 1877	11	1063
4,749	Same.....same	June 19, 1877	11	1063
4,750	Same.....same	June 19, 1877	11	1063
4,751	Same.....same	June 19, 1877	11	1063
4,752	Same.....same	June 19, 1877	11	1063
4,753	Same.....same	June 19, 1877	11	1063
4,754	Same.....same	June 19, 1877	11	1063
4,755	Same.....same	June 19, 1877	11	1063
4,799	Same.....Chewing and smoking tobacco, cigars and cigarettes	July 3, 1877	12	8
4,800	Same.....same	July 3, 1877	12	8
4,801	Same.....same	July 3, 1877	12	8
4,802	Same.....Cigars and cigarettes	July 3, 1877	12	8
4,803	Same.....Chewing and smoking tobacco, cigars and cigarettes	July 3, 1877	12	8
4,804	Same.....same	July 3, 1877	12	8
4,850	Same.....Smoking and chewing tobacco, cigars and cigarettes	July 17, 1877	12	95
4,851	Same.....same	July 17, 1877	12	95
4,805	Hirsch, David, Memphis, Tenn. Spirituous liquors and wines	July 3, 1877	12	8
5,097	Hirsch, Joseph, New York, N. Y. Cigars, cigarettes, and smoking-tobacco	Aug. 28, 1877	12	354
4,358	Hirschhorn & Co., L., New York, N. Y. Cigars	Feb. 13, 1877	11	251
5,189	Hodgson, John H., Brooklyn, N. Y. Cheese	Oct. 2, 1877	12	5
5,366	Hoffheimer Brothers, Cincinnati, Ohio. Whisky	Nov. 13, 1877	12	798
4,628	Hofmann, Friedericke, Jersey City Heights, N. J. Washing-crystal	May 15, 1877	11	834
4,629	Same.....same	May 15, 1877	11	834
4,607	Holden & Co., A. H., Chicago, Ill. Mixed paints	May 1, 1877	11	743
4,501	Holland, Jane, Windham, Conn. Silk-twist	Mar. 27, 1877	11	505
4,502	Same.....same	Mar. 27, 1877	11	505
5,248	Holland, John W., Danville, Pa. Plug-tobacco	Oct. 23, 1877	12	669
4,788	Holme & Tuller, Hartford, Conn. Soap	June 26, 1877	11	1115
5,180	Holyoke Paper Company, Holyoke, Mass. Writing-paper	Sept. 25, 1877	12	520
4,806	Holzmann & Deutschberger, New York, N. Y. Cigars and cigarettes	July 3, 1877	12	8
5,251	Hooper & Co., R. A., New York, N. Y. Hats	Oct. 23, 1877	12	669
5,123	Hopkins, T. E., Fitchburg, Mass. Woolen fabrics	Sept. 4, 1877	12	397
5,027	Hornby, Alexander, Craigsville, N. Y. Steam-cooked cereals	Aug. 14, 1877	12	270
5,346	Horner, W. B., Newcastle, Pa. Rat, mouse, and roach exterminator	Nov. 20, 1877	12	844
5,434	Hotaling, Anson P., San Francisco, Cal. Whisky	Dec. 18, 1877	12	1027
4,463	Hotchkiss, Hiram G., Lyons, N. Y. Essential oils	Mar. 20, 1877	11	461
4,696	Houghton, Herbert R., New York, N. Y. Fire-escape and life-preserving apparatus	June 5, 1877	11	973
4,897	Houriet, Jules, Terre Haute, Ind. Medical compound	July 17, 1877	12	96
5,047	Hover, Henry F., Philadelphia, Pa. Sofa-beds	Aug. 14, 1877	12	270
	Hover, J. (*See* Jenkins & Hover.)			
4,649	Howard & Brewster, Unadilla and New York, N. Y. Shaving-soap	May 15, 1877	11	834
4,878	Howard, Sanger & Co., assignors of one-half interest to F. R. Arnold & Co., New York, N. Y. Cosmetics	July 17, 1877	11	96
5,048	Hoyt & Co., E. W., Lowell, Mass. Cologne	Aug. 14, 1877	12	270
4,344	Huan & Co., Jacksonville, Fla. Cigars	Feb. 6, 1877	11	199
4,872	Hubbard & Co., Dr., Louisville, Ky. Medicine-case of ready-compounded prescriptions	July 17, 1877	11	96
5,295	Hunt, Hiram W., Brooklyn, N. Y. Plug-tobacco	Nov. 6, 1877	12	757
5,345	Same.....same	Nov. 20, 1877	12	841
4,517	Hunt, William, near North East, Md. Cosmetic	Apr. 3, 1877	11	555
5,087	Hurlburt, Charles T., Brooklyn, N. Y. Homœopathic medicinal preparations	Aug. 28, 1877	12	354
4,313	Hutchinson, B. E., Worcester, Mass. Medicinal troches	Jan. 30, 1877	11	154
4,288	Hyland, and Charles Rotton, New Dorp and Brooklyn, N. Y. Cod-liver oil	Jan. 23, 1877	11	113
5,408	Ilsley, Doubleday & Co., New York, N. Y. Lubricating-oils	Dec. 11, 1877	12	982
4,650	Iogels, Joseph, Irvington, Ind. Seed and grain drills	May 14, 1877	11	834
5,380	Iowa and Missouri Coal and Land Company, Burlington, Iowa. Coal	Nov. 27, 1877	12	891
4,969	Irish, Benjamin T., New Bedford, Mass. Photographic pictures	July 31, 1877	12	190
4,771	Ish, James K., Omaha, Nebr. Extract of ginger	June 26, 1877	11	1114
4,273	Ives, Beecher & Co., New York, N. Y. Gin	Jan. 16, 1877	11	71
5,053	Jackson & Brother, Oswald, New York, N. Y. Brandy	Aug. 21, 1877	12	314
4,403	Jackson & Co., C. A., Petersburg, Va. Plug-tobacco	Feb. 27, 1877	11	332
4,556	Jacobs, Amelia, Brooklyn, N. Y. Hats and caps	Apr. 17, 1877	11	643
5,366	Jacoby & Co., S., New York, N. Y. Cigars, cigarettes, and cigarros	Nov. 27, 1877	12	891
4,666	Janesville Cotton Manufacturing Company, Janesville, Wis. Cotton sheetings	May 22, 1877	11	880
4,274	Jaques, George, Boston, Mass. Eau-de-Cologne	Jan. 16, 1877	11	71
4,587	Same.....Perfumery	May 1, 1877	11	742
4,998	Jàquet & Co., G., New Orleans, La. Fine-cut smoking-tobacco	Aug. 7, 1877	12	230
4,903	Jayne & Son, D., Philadelphia, Pa. Medicinal preparation	July 17, 1877	12	97
5,141	Jeffers, Perley, Chicago, Ill. Medicinal preparation	Sept. 11, 1877	12	432
5,052	Jenkins & Brother, F. W., New York, N. Y., and Pittsburg, Pa. Flour	Aug. 21, 1877	12	314
4,518	Jenkins & Hover, Oswego, N. Y. Flour	Apr. 3, 1877	11	555

List of trade marks registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
4,519	Jenkins & Hover, Oswego, N. Y. Flour	Apr. 3, 1877	11	555
4,953	Same.....same	July 24, 1877	12	140
5,028	Same.....same	Aug. 14, 1877	12	270
4,275	Jenkins & Sons, T. Robert, Baltimore, Md. Sugar-cured hams	Jan. 16, 1877	11	71
5,213	Same.....Hams	Oct. 16, 1877	12	627
4,667	Jenkins, Isaac G., and J. Hover, Oswego, N. Y. Flour	May 22, 1877	11	880
4,716	Jewett & Sherman Company, Milwaukee, Wis. Baking and yeast powders and yeast-cakes	June 12, 1877	11	1012
4,789	Same.....Baking-powder	June 26, 1877	11	1115
4,790	Same.....same	June 26, 1877	11	1115
5,356	Johnson, Clark & Co., New York, N. Y. Sewing-machines, needles, and attachments	Nov. 20, 1877	12	844
4,483	Johnson, Edward M., Brooklyn, N. Y. Washing-powder	Mar. 27, 1877	11	501
4,345	Johnson, Mary E., Newburyport, Mass. Hair-preparation	Feb. 6, 1877	11	199
4,691	Johnson, William W., Cincinnati, Ohio. Whisky	May 28, 1877	11	927
4,419	Johnston, George, Detroit, Mich. Spectacles and eye-glasses	Mar. 6, 1877	11	376
4,999	Johnston, Holloway & Co., Philadelphia, Pa. Bitters	Aug. 7, 1877	12	239
5,000	Same.....Medicinal compound	Aug. 7, 1877	12	230
5,001	Same.....same	Aug. 7, 1877	12	230
5,116	Jones, Claudius, Seward, Nebr. Animal-trap	Sept. 4, 1877	12	396
5,002	Jones, Conrad S. and J. P., Philadelphia, Pa. Ladies' dress-goods	Aug. 7, 1877	12	230
5,214	Jones, James E., Weare, N. H. Woolen goods, such as cassimeres, doeskins, &c	Oct. 16, 1877	12	627
4,791	Jones, John M., Jersey City, N. J. Soap	June 26, 1877	11	1115
	Jones, J. P. (*See* Jones, C. S. and J. P.)			
5,422	Jones, Simon N., Louisville, Ky. Liquid crab-orchard salts	Dec. 11, 1877	12	982
5,124	Joseph, Nathan, San Francisco, Cal. Razors	Sept. 4, 1877	12	397
4,591	Keeler, Ezra W., Yardville, N. Y. Twine, warp, yarn, &c	May 1, 1877	11	742
4,440	Keeshan, Michael F., Cincinnati, Ohio. Manufactured tobacco	Mar. 13, 1877	11	421
4,526	Keller, John H., New Orleans, La. Soap	Apr. 10, 1877	11	601
4,908	Keller, William L., Baltimore, Md. Liniment	July 17, 1877	12	97
4,503	Kelly & Co., Horace R., New York, N. Y. Cigar	Mar. 27, 1877	11	505
5,436	Kennedy & Co., Pittsburg, Pa. Medical compound	Dec. 18, 1877	12	1027
4,970	Kennedy, Simon H., Omaha, Nebr. Medical preparations	July 31, 1877	12	190
4,520	Kiefer, Augustus, Indianapolis, Ind. Medical preparation	Apr. 3, 1877	11	555
4,668	Same.....Medicinal preparation	May 22, 1877	11	880
4,590	Kimball & Co., William S., Rochester, N. Y. Cigarettes	May 1, 1877	11	742
4,651	Same.....same	May 15, 1877	11	834
4,669	Same.....same	May 22, 1877	11	880
5,278	Same.....Smoking-tobacco	Oct. 30, 1877	12	717
5,435	Same.....same	Dec. 18, 1877	12	1027
5,347	Kimball, Gaullier & Co., New York, N. Y. Cigars, cigarettes, cheroots, smoking and chewing tobacco	Nov. 20, 1877	12	844
5,348	Same.....same	Nov. 20, 1877	12	844
	King, C. V. (*See* King, V. C. and C. V.)			
5,167	King, Jabe O., New York, N. Y. Spool-cotton	Sept. 25, 1877	12	519
4,276	King, V. C. and C. V., New York, N. Y. Plaster	Jan. 16, 1877	11	71
4,250	King, William T., Richmond, Va. Sumac	Jan. 2, 1877	11	6
4,852	Kingsford & Son, T., Oswego, N. Y. Starch and starch products	July 17, 1877	12	95
5,318	Kingsford, Thomson, Oswego, N. Y. Starch	Nov. 13, 1877	12	799
5,357	Same.....same	Nov. 20, 1877	12	844
4,464	Kinney, Francis S., New York, N. Y. Cigarettes	Mar. 20, 1877	11	461
5,329	Kline, Robert H., Philadelphia, Pa. Ring pessaries	Nov. 20, 1877	12	843
5,252	Knox, Charles, New York, N. Y. Hats and caps	Oct. 23, 1877	12	669
4,359	Knox, Susan R., New York, N. Y. Fluting-machine	Feb. 13, 1877	11	251
4,692	Kopitzsch & Son, Charles F., Pottsville, Pa. Soap	May 28, 1877	11	927
5,330	Kraft & Co., J. G., Baltimore, Md. Canned oysters, fruits, and vegetables	Nov. 20, 1877	12	844
4,717	Kramer & Seifert, Pittsburg, Pa. Compressed yeast	June 12, 1877	11	1012
5,409	Kroeber, Florence, Hoboken, N. J. Clocks	Dec. 11, 1877	12	982
5,417	Same.....same	Dec. 11, 1877	12	982
5,419	Same.....same	Dec. 11, 1877	12	982
5,253	Krygers, Rasmussen & Co., Gold Run, Cal. Starch for food	Oct. 23, 1877	12	669
4,536	Kunkelmann & Co., Rheims, France. Champagne wine	Apr. 17, 1877	11	642
4,537	Same.....same	Apr. 17, 1877	11	642
4,538	Same.....same	Apr. 17, 1877	11	642
4,539	Same.....same	Apr. 17, 1877	11	642
4,540	Same.....same	Apr. 17, 1877	11	642
4,588	Same.....same	May 1, 1877	11	742
4,589	Same.....same	May 1, 1877	11	742
4,718	Same.....same	June 12, 1877	11	1012
4,252	La Bau, Sarah C., Brooklyn, N. Y. Medical compound	Jan. 2, 1877	11	6
4,943	Lafferty & Co., Richmond, Va. Medicinal preparations	July 24, 1877	12	140
4,792	Lake Guano and Shell Fertilizer Company, New York, N. Y. Fertilizers	June 26, 1877	11	1115
4,670	Lalance & Grosjean Manufacturing Company, New York. Enameled sheet-metal ware	May 22, 1877	11	880
4,671	Same.....same	May 22, 1877	11	880
4,617	Lambie & Sargent, New York, N. Y. Tables	May 8, 1877	11	791
4,420	Lane & Johnston, Newark, N. J. Fertilizer	Mar. 6, 1877	11	376
4,940	Lane, George T., Troy, N. Y. Iron and cast-steel hoes	July 24, 1877	12	139
4,879	Laubach & Co., A. J., Philadelphia, Pa. Liniment	July 17, 1877	11	96
5,455	Laube, Abraham, New York, N. Y. Salve	Dec. 25, 1877	12	1078
5,217	Lauferty, Emanuel, New York, N. Y. Lye and potash	Oct. 16, 1877	12	627
4,258	Laughland & Co., New York, N. Y. Bale ties and materials	Jan. 9, 1877	11	49
5,152	Laughlin, Homer, East Liverpool, Ohio. Pottery-ware, including stone-china and earthenware	Sept. 18, 1877	12	478
5,297	Laurencot, Joseph B., Hoboken, N. J. Optical instruments	Nov. 6, 1877	12	757
4,391	Lautz Brothers & Co., Buffalo, N. Y. Soap	Feb. 20, 1877	11	291
5,098	Same.....same	Aug. 28, 1877	12	351
4,421	Lawrence Manufacturing Company, Lowell, Mass. Cotton sheetings	Mar. 6, 1877	11	376
4,672	Same.....Flannels made of cotton	May 22, 1877	11	880
5,331	Lawson Chemical Company, Cleveland, Ohio. Medical compound	Nov. 20, 1877	12	844
5,190	Leaman, W. and A., New York, N. Y. Plug-tobacco	Oct. 2, 1877	12	5
4,732	Lediard, Charles, New York, N. Y. Toilet-water	June 12, 1877	11	1012
5,133	Lee & Shepard, Boston, Mass. Books	Sept. 11, 1877	12	432
5,153	Same.....same	Sept. 18, 1877	12	478
5,287	Lee, Maria L., Philadelphia, Pa. Medicinal compound	Oct. 30, 1877	12	717
4,853	Leisler & Sommerhoff, New York, N. Y. Silk ribbons	July 17, 1877	12	95
4,941	Same.....Black silks	July 24, 1877	12	139
4,465	Lesher, Whitman & Co., New York, N. Y. Trimmings, such as braids and bindings	May 20, 1877	11	461

List of trade-marks registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
4,314	Le Van, La Roche & Gritman, Lockport, N. Y. Cotton batting	Jan. 30, 1877	11	154
5,181	Levi, Joseph, New York, N. Y. Buttons	Sept. 25, 1877	12	520
4,773	Levy Brothers, New York, N. Y. Cigars	June 26, 1877	11	1114
5,081	Same.....same	Aug. 21, 1877	12	315
5,410	Lewis, Walter H., New York, N. Y. Black ribbons	Dec. 11, 1877	12	982
4,441	Libby, James L., New York, N. Y. Paper collars	Mar. 13, 1877	11	421
4,466	Same.....same	Mar. 20, 1877	11	461
4,467	Same.....same	Mar. 20, 1877	11	461
4,468	Same.....same	Mar. 20, 1877	11	461
4,315	Lichtenstein Brothers & Co., New York, N. Y. Cigars, cigarettes, and tobacco	Jan. 30, 1877	11	155
4,889	Same.....Cigars, cigarettes, chewing and smoking tobacco	July 17, 1877	12	96
4,890	Same.....same	July 17, 1877	12	96
4,891	Same.....same	July 17, 1877	12	96
5,134	Lichtenstein, L., Richmond, Va. Linen thread	Sept. 11, 1877	12	432
5,333	Lieber, Sons & Co., B., New York, N. Y. Whisky	Nov. 20, 1877	12	844
4,387	Lies & Co., George P., New York, N. Y. Cigars	Feb. 20, 1877	11	291
5,332	Liggett & Myers, Saint Louis, Mo. Plug chewing-tobacco	Nov. 20, 1877	12	844
5,381	Same.....same	Nov. 27, 1877	12	891
4,733	Lilienthal & Co., San Francisco, Cal. Whisky	June 12, 1877	11	1012
4,734	Same.....same	June 12, 1877	11	1012
4,674	Lilienthal, Christian H., New York, N. Y. Cut tobacco	May 22, 1877	11	880
5,003	Lincoln & Co., George S., Hartford, Conn. Molasses-gate	Aug. 7, 1877	12	230
5,125	Lincoln & Holbrook, Boston, Mass. Soap	Sept. 4, 1877	12	397
4,820	Linden, John, Cleveland, Ohio. Medical preparation	July 3, 1877	12	8
4,361	Lindsay, David A., New York, N. Y. Dry goods	Feb. 13, 1877	11	251
5,358	Link, David C., New York, N. Y. Hams	Nov. 20, 1877	12	844
4,818	Litchfield & Co., H. C., Brooklyn, N. Y. Root-beer	July 3, 1877	12	8
5,437	Livermore, Emery, Saint Louis, Mo. Medical preparation	Dec. 18, 1877	12	1027
5,349	Livingston, Susannah, Chicago, Ill. Laundry preparation	Nov. 20, 1877	12	844
4,942	Lockwood, Howard, New York, N. Y. Printed publications	July 24, 1877	12	159
4,360	Lomax, George H., Somerville, Mass. Lamp	Feb. 13, 1877	11	251
5,235	Long & Co., John R., Baltimore, Md. Fertilizers	Oct. 16, 1877	12	627
4,774	Lord, Loven B., Burlington, Vt. Medical compound	June 26, 1877	11	1114
5,216	Lorillard & Co., P., Jersey City, N. J. Smoking-tobacco	Oct. 16, 1877	12	627
5,279	Same.....Plug chewing-tobacco	Oct. 30, 1877	12	717
5,041	Loth & Co., Joseph, New York, N. Y. Silk ribbons	Aug. 14, 1877	12	270
4,289	Lovell & Co., F. H., New York, N. Y. Lamp-burner	Jan. 23, 1877	11	113
4,299	Same.....Lamp-chimney	Jan. 23, 1877	11	113
4,613	Lowendall, Louis, Dresden, Germany. Violins, tenors, and violincellos	May 8, 1877	11	790
4,469	Lowenthal & Co., S., Cincinnati, Ohio. Cigar	Mar. 20, 1877	11	461
4,470	Same.....same	Mar. 20, 1877	11	461
5,168	Same.....Cigars	Sept. 25, 1877	12	519
4,404	Lozano, Pendas & Co., New York, N. Y. Tobacco and cigars	Feb. 27, 1877	11	332
4,405	Same.....same	Feb. 27, 1877	11	332
5,269	Same.....Cigars, cigarettes, and smoking and chewing tobacco	Oct. 23, 1877	12	670
5,218	Lubrecht, Charles, Brooklyn, N. Y. Cologne	Oct. 16, 1877	12	627
5,367	Same.....Dentifrice	Nov. 27, 1877	12	891
4,346	Ludeman, Harm. H., Williamsburg, N. Y. Corn-starch	Feb. 6, 1877	11	199
4,575	Luyties Brothers, New York, N. Y. Wines and spirits	Apr. 24, 1877	11	691
5,298	Lyon & Co., Z. I., Durham, N. C. Smoking-tobacco	Nov. 6, 1877	12	757
4,652	Macdonald & Sutton, New York, N. Y. Rubber syringe	May 15, 1877	11	834
4,576	Mahn, Louis H., Jamaica Plain, Mass. Base-balls	Apr. 24, 1877	11	691
5,192	Maltby & Co., G. E., New York, N. Y., Keyport, N. J., and Norfolk, Va. Canned oysters	Oct. 2, 1877	12	5
5,236	Maltby, Caleb S., New Haven, Conn. Canned oysters	Oct. 16, 1877	12	628
5,237	Same.....Canned oysters, fruits, and vegetables	Oct. 16, 1877	12	628
	Mandel, S. (*See* Eisner & Mandel.)			
4,614	Mandel, Samuel E., New York, N. Y. Lubricating compounds	May 8, 1877	11	791
4,316	Mann & Co., Bell, Chicago, Ill. Medicated electric plaster	Jan. 30, 1877	11	155
5,220	Mann & Co., William, jr., Lewiston, Pa. Axes	Oct. 16, 1877	12	627
4,422	Mann, Alexander S., Saint Louis, Mo. Signs	Mar. 6, 1877	11	377
4,824	Manny & Co., Saint Louis, Mo. Agricultural implement	July 3, 1877	12	8
4,347	Mapes, Charles V., New York, N. Y. Composition of superphosphate of lime	Feb. 6, 1877	11	199
4,708	Marburg, F. W., Baltimore, Md. Cigars	June 5, 1877	11	973
4,719	Marchisi, John B., Utica, N. Y. Medical compound	June 12, 1877	11	1012
5,154	Marsh & Co., New York, N. Y. Mixture for washing clothes	Sept. 18, 1877	12	478
5,438	Marsh & Co., C. B., New York, N. Y. Starch	Dec. 18, 1877	12	1027
5,382	Marsh, Francis A., Syracuse, N. Y. Extracts for the handkerchief, and cologne	Nov. 27, 1877	12	891
5,394	Marshall, Francis F., New York, N. Y. Cosmetics	Dec. 4, 1877	12	943
4,317	Martell & Co., Cognac, France. Brandy	Jan. 30, 1877	11	155
4,318	Same.....same	Jan. 30, 1877	11	155
4,319	Same.....same	Jan. 30, 1877	11	155
4,775	Martin, Charles R., Sulphur, Ky. Hog-cholera remedy	June 26, 1877	11	1114
4,557	Marvin & Co., S. S., Pittsburg, Pa. Flour	Apr. 17, 1877	11	643
4,776	Same.....same	June 26, 1877	11	1114
5,169	Same.....same	Sept. 25, 1877	12	519
4,615	Mason & Co., F. H., Quincy, Ill. Dry hop-yeast	May 8, 1877	11	791
5,205	Massey, Orrin W., Macon, Ga. Cotton-gins	Oct. 9, 1877	12	36
4,854	Masten, Willard E., Albany, N. Y. Perfume known as "Florida water"	July 17, 1877	12	95
4,529	Masury, Young & Co., Boston, Mass. Cleansing compound	Apr. 10, 1877	11	601
5,170	Same.....Wool-oil	Sept. 25, 1877	12	519
	Mathey, A. (*See* Mathey, L. and A.)			
4,823	Mathey, L. and A., New York, N. Y. Watches	July 3, 1877	12	8
5,004	Matthiessen & Wiechers Sugar Refining Company, New York, N. Y. Refined sugar	Aug. 7, 1877	12	230
4,527	Mau & Co., Albert, San Francisco, Cal. Teas	Apr. 10, 1877	11	601
4,809	Mauger, Victor E., New York, N. Y. Playing-cards	July 3, 1877	12	8
4,810	Same.....Medical preparations	July 3, 1877	12	8
5,191	Same.....Playing-cards	Oct. 2, 1877	12	5
4,504	Mayer, Strouse & Co., New York, N. Y. Corset	Mar. 27, 1877	11	505
5,029	Maynard & Jones, San Francisco, Cal. Shoes	Aug. 14, 1877	12	270
4,813	McCoy & Co., New York, N. Y. Cigars, cigarettes, smoking and chewing tobacco, and snuff	July 3, 1877	12	8
4,971	McCullough Soap Company, Milwaukee, Wis. Soap	July 31, 1877	12	190
4,521	McDonald & Co., M. C., Chicago, Ill. Cigars	Apr. 3, 1877	11	555
4,558	Same.....same	Apr. 17, 1877	11	643
5,321	McGill, George W., New York, N. Y. Metallic fasteners	Nov. 13, 1877	12	799

Alphabetical list of trade-marks registered during the year 1877—Continued.

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5,423	McHugh & Johnson, New York, N. Y. Medicine for the cure of kidney and bladder diseases	Dec. 11, 1877	12	982
4,528	McKeon & Raphael, South Easton, Pa. Cheviots	Apr. 10, 1877	11	601
4,972	McKeone, James, Philadelphia, Pa. Soap	July 31, 1877	12	190
4,811	Mendel & Brother, M. W., New York, N. Y. Cigars and cigarettes	July 3, 1877	12	8
4,812	Same.....same	July 3, 1877	12	8
4,827	Merchants' Tobacco Company, Boston, Mass. Plug-tobacco	July 3, 1877	12	9
4,828	Same.....same	July 3, 1877	12	9
4,829	Same.....same	July 3, 1877	12	9
5,350	Same.....same	Nov. 20, 1877	12	844
5,351	Same.....same	Nov. 20, 1877	12	844
5,368	Same.....same	Nov. 27, 1877	12	891
5,135	Merriam & Frost, Springfield, Mass. Medical compound	Sept. 11, 1877	12	432
4,471	Messinger, Charles R., Toledo, Ohio. Smoking-tobacco	Mar. 20, 1877	11	461
4,522	Same.....same	Apr. 3, 1877	11	555
4,984	Same.....Tobacco	July 31, 1877	12	191
5,299	Same.....Smoking-tobacco	Nov. 6, 1877	12	757
5,300	Same.....same	Nov. 6, 1877	12	757
4,784	Metal Manufacturing Company, Saint Louis, Mo. Enameled sheet-metal ware	June 26, 1877	11	1114
4,505	Metcalf & Co., Theodore, Boston, Mass. Sachet-powder	Mar. 27, 1877	11	505
5,319	Same.....Cod-liver oil	Nov. 13, 1877	12	799
4,320	Meyer & Co., A., Chicago, Ill. Smoking-tobacco	Jan. 30, 1877	11	155
4,675	Meyer & Co., Emile, Paris, France. Perfumery	May 22, 1877	11	880
4,973	Meyer, Huschart & Co., Baltimore, Md. Dried beef, hams, breakfast bacon, and shoulders	July 31, 1877	12	190
5,117	Miami Distilling Company, Hamilton and Cincinnati, Ohio. Whisky	Sept. 4, 1877	12	396
4,506	Michenfelder, Anton, Detroit, Mich. Lager-beer	Mar. 27, 1877	11	505
5,219	Middleton & Brother, Philadelphia, Pa. Baking-powder	Oct. 16, 1877	12	627
4,676	Midnight Yarn Company, Philadelphia, Pa. Woolen yarn, known as "Germantown wool"	May 22, 1877	11	880
4,677	Same.....Woolen yarn, known as "Cashmere yarn"	May 22, 1877	11	880
4,348	Millar & Co., E. B., Chicago, Ill. Japan teas	Feb. 6, 1877	11	199
4,735	Miller & Bingham, Troy, N. Y. Linen collars	June 12, 1877	11	1012
4,855	Miller & Brother, Philadelphia, Pa. Shirts	July 17, 1877	12	95
5,042	Miller, David, New York, N. Y. Plaiting-machines	Aug. 14, 1877	12	270
5,288	Miller, Henry F., Boston, Mass. Piano-fortes	Oct. 30, 1877	12	717
4,944	Miller, William H. S., Newark, N. J. Coal	July 24, 1877	12	140
5,055	Moët & Chandon, Epernay, France. Champagne wine	Aug. 21, 1877	12	314
5,056	Same.....same	Aug. 21, 1877	12	314
5,005	Moffett, Charles J., Columbus, Ga. Medical compound	Aug. 7, 1877	12	230
5,259	Mohawk Yeast Company, Waterford, N. Y. Yeast	Nov. 20, 1877	12	844
4,777	Monteath & Co., Albany, N. Y. Soap	June 26, 1877	11	1114
5,160	Montgomery, Clarence W., Brooklyn, N. Y. Stove-polish	Sept. 18, 1877	12	489
4,737	Moody, Putnam & Co., Nashua, N. H. Marbleized wood and other marbleized fibrous materials	June 12, 1877	11	1012
5,172	Moonelis, Adolph, New York, N. Y. Cigarettes	Sept. 25, 1877	12	519
5,280	Mooney & Co., W. M., Au Sable Chasm, N. Y. Horseshoe-nails	Oct. 30, 1877	12	717
4,300	Moore & Brady, Baltimore, Md. Canned oysters	Jan. 23, 1877	11	113
5,155	Moore, Jenkins & Co., New York, N. Y. Cigars and cigarettes	Sept. 18, 1877	12	478
5,215	Same.....Fine-cut and plug chewing-tobacco	Oct. 16, 1877	12	627
4,736	Same.....Cigars	June 12, 1877	11	1012
4,822	Same.....Cigars and cigarettes	July 3, 1877	12	8
5,334	More, Reynolds & Co., San Francisco, Cal. Whisky	Nov. 20, 1877	12	844
4,856	Morehead Manufacturing Company, Morehead, Minn. Flour	July 17, 1877	12	95
4,472	Morgan Envelope Company, Springfield, Mass. Note paper and envelopes	Mar. 20, 1877	11	461
5,017	Same.....Writing-paper and envelopes	Aug. 7, 1877	12	230
5,246	Morgan's Sons Co., Enoch, New York, N. Y. Polishing preparations	Oct. 16, 1877	12	628
5,320	Same.....Polishing material	Nov. 13, 1877	12	799
5,352	Morley Brothers, Austin, Tex. Liniment	Nov. 20, 1877	12	844
4,349	Mortimer, John D. D., Chicago, Ill. Playing-cards	Feb. 6, 1877	11	199
5,289	Moses, Oscar G., New York, N. Y. Medicinal preparation	Oct. 30, 1877	12	717
5,019	Moses, Rynear O., New Orleans, La. Dentifrice	Aug. 7, 1877	12	230
4,880	Moss, George A., Orange, N. J. Blacking, boot and shoe dressing, and stove-polish	July 17, 1877	11	96
4,559	Mudge, Sawyer & Co., E. R., Boston, Mass., New York, N. Y., and Philadelphia, Pa. Sheetings	Apr. 17, 1877	11	643
5,099	Muller, Henry, New York, N. Y. Cigars	Aug. 28, 1877	12	354
4,473	Mumm & Co., G. H., Rheims, France. Champagne wine	Mar. 20, 1877	11	461
4,484	Same.....same	Mar. 27, 1877	11	504
5,457	Mundell & Co., Philadelphia, Pa. Shoe-tips	Dec. 25, 1877	12	1078
5,043	Murdock, Albert L., Jamaica Plains, Boston, Mass. Flour	Aug. 14, 1877	12	270
4,277	Muzzy & Sage Brothers, Elkhart, Ind. Starch	Jan. 16, 1877	11	71
5,456	Myer, John A., Brooklyn, N. Y. Soaps	Dec. 25, 1877	12	1078
4,630	Myers, Andrew G., New York, N. Y. Water-closets	May 15, 1877	11	834
4,530	Myers, S. S., Philadelphia, Pa. Stove-polish	Apr. 10, 1877	11	691
5,173	National Rubber Company, Bristol, R. I. Rubber boots and shoes	Sept. 25, 1877	12	520
5,126	National Tube Works Company, Boston, Mass., and McKeesport, Pa. Locomotive boiler-tubes	Sept. 4, 1877	12	397
4,577	Needham & Son, E. P., New York, N. Y. Organs	Apr. 24, 1877	11	691
4,301	Nelson, James R., Wells River, Vt. Medicines	Jan. 23, 1877	11	113
4,631	Neuwall, Auselem, Chicago, Ill. Stencil-plate	May 15, 1877	11	834
5,290	New, Tobias, Brooklyn, N. Y. Water-proof cellars	Oct. 30, 1877	12	717
5,160	New York Belting and Packing Company, New York, N. Y. Rubber hose	Aug. 28, 1877	12	354
5,138	New York Consolidated Card Company, New York, N. Y. Playing-cards	Sept. 11, 1877	12	432
5,340	Same.....same	Nov. 20, 1877	12	844
5,341	Same.....same	Nov. 20, 1877	12	844
5,342	Same.....same	Nov. 20, 1877	12	844
4,926	Newton & Co., S. S., Binghamton, N. Y. Liquid blacking	July 24, 1877	12	139
4,507	Newton & Richardson, Erie, Pa. Edible products of a packing-house	Mar. 27, 1877	11	505
4,678	Nichols, Samuel B., Brooklyn, N. Y. Spool-cotton	May 22, 1877	11	880
4,406	Nickerson, Edward G., Boston, Mass. Prepared and packed fish	Feb. 27, 1877	11	332
4,485	Nicols, P. D., Pittsburg, Pa. Iron paint	Mar. 27, 1877	11	504
4,578	Noble & Co., Charles, Philadelphia, Pa. Stoves	Apr. 24, 1877	11	691
5,221	Norman, Henry, Lynn, Mass. Foot-salve	Oct. 16, 1877	12	627
5,335	Novelty Chemical Company, New York, N. Y. Preparation for cure of whooping-cough	Nov. 20, 1877	12	844
5,439	Same.....Medical compound	Dec. 18, 1877	12	1027
5,291	Nürnberger Ultramarin Fabrik, Nuremberg, Bavaria. Coloring matter	Oct. 30, 1877	12	717
4,259	Oakville Company, Waterbury, Conn. Pins	Jan. 9, 1877	11	40
4,679	Oates & Co., John F., Providence, R. I. Salve or ointment for the piles	May 22, 1877	11	881
5,261	O'Brien, P., South Bend, Ind. Electric priming or paint	Oct. 23, 1877	12	670
4,985	Oebs, Martin B., New York, N. Y. Knitting-cotton	July 31, 1877	12	191

List of trade-marks registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
4,253	Ogborn, Marshall E., Cincinnati, Ohio. Grape-juice	Jan. 2, 1877	11	6
4,945	Ogden & Co., George, Philadelphia, Pa. Roasted coffee	July 24, 1877	12	140
4,913	Oliffe, William M., New York, N. Y. Pharmaceutical preparation	July 17, 1877	12	97
4,560	Olmsted, Leverett H., Brooklyn, N. Y. Lamp	Apr. 17, 1877	11	643
5,222	Orgler, Salomen, Hoboken, N. J. Cigars, cigarettes, and chewing and smoking tobacco	Oct. 16, 1877	12	627
4,302	Oriental Powder Mills, Boston, Mass. Gunpowder	Jan. 23, 1877	11	113
4,303	Same.....same	Jan. 23, 1877	11	113
4,362	Same.....same	Feb. 13, 1877	11	251
4,423	Orr, John A., Brooklyn, N. Y. Copper paint	Mar. 6, 1877	11	377
4,424	Osborn, Francis M., Port Chester, N. Y. Dentifrice	Mar. 6, 1877	11	377
5,411	Pace, James B., Richmond, Va. Plug-chewing tobacco	Dec. 11, 1877	12	982
5,307	Page, James H., Boston, Mass. Cigars, cigarettes, and smoking and chewing tobacco	Nov. 13, 1877	12	798
4,489	Palm & Co., C., New York, N. Y. Decalcomanie transfer-pictures	Mar. 27, 1877	11	504
4,531	Palmer Brothers., Montville, Conn. Bed-quilts or comfortables	Apr. 10, 1877	11	601
5,360	Palmer, Wilford L., New York, N. Y. Buttons	Nov. 20, 1877	12	844
4,857	Paret, John, New York, N. Y. Overcoats	July 17, 1877	12	95
4,284	Pargetized Can Company, Keene, N. H. Tanks, cans, and other receptacles for oil, &c	Jan. 16, 1877	11	71
4,260	Park, John D., Covington, Ky. Medical compound	Jan. 9, 1877	11	40
4,261	Same.....same	Jan. 9, 1877	11	40
4,392	Same.....Gin	Feb. 20, 1877	11	291
5,206	Same.....same	Oct. 9, 1877	12	36
4,407	Parker & Co., N. H., Boston, Mass. Stove-polish	Feb. 27, 1877	11	332
4,321	Passavant & Co., New York, N. Y. Dress-goods	Jan. 30, 1877	11	155
4,954	Same.....same	July 24, 1277	12	140
4,955	Same.....same	July 24, 1877	12	140
4,610	Pattberg & Brothers, Lewis, New York, N. Y. Picture-frame	May 1, 1877	11	743
5,270	Paxson, Charles, New York, N. Y. Medical compound	Oct. 23, 1877	12	670
4,738	Payne, Rebecca F., Philadelphia, Pa. Cosmetic	June 12, 1877	11	1012
4,363	Pearl, Adolph, New York, N. Y. Smoking and chewing tobacco	Feb. 13, 1877	11	251
5,271	Pebbles, Riley, Natick, Mass. Soles for boots and shoes	Oct. 23, 1877	12	670
4,898	Peck, Thaddeus E., Bridgeport, Conn. Bitters	July 17, 1877	12	96
5,006	Pegram, Benjamin R., jr., New York, N. Y. Flour	Aug. 7, 1877	12	230
5,238	Peirce, George A., Boston, Mass. Water-proof dressing for boots and shoes	Oct. 16, 1877	12	628
4,697	Pennsylvania Salt Manufacturing Company, Philadelphia, Pa. Caustic alkali	June 5, 1877	11	973
4,680	Peper, Christian, Saint Louis, Mo. Chewing-tobacco	May 22, 1877	11	881
5,324	Pepper, James E., New York, N. Y. Whisky	Nov. 13, 1877	12	799
4,579	Perkins, Charles B., Boston, Mass. Cigarettes	Apr. 24, 1877	11	691
5,281	Perry & Co. (limited), New York, N. Y. Pens	Oct. 30, 1877	12	717
4,364	Pettit and Barker, Fredonia, N. Y. Eye-salve	Feb. 13, 1877	11	251
4,580	Phillips, Charles H., New York, N. Y. Medical preparation	Apr. 24, 1877	11	691
4,918	Philo, Nathan F., Crescent, N. Y. Cough-sirup	July 17, 1877	12	97
4,653	Pierce & Co., George, Boston, Mass. Medical preparation	May 15, 1877	11	834
4,911	Pierce & Co., S. S., Boston, Mass. Bottled cider	July 17, 1877	12	97
4,487	Pierce, R. V., Buffalo, N. Y. Medicine	Mar. 27, 1877	11	504
4,488	Same.....same	Mar. 27, 1877	11	504
4,956	Same.....Medical compound	July 24, 1877	12	140
4,957	Same.....same	July 24, 1877	12	140
4,974	Same.....same	July 31, 1877	12	190
4,772	Pinckney, Jackson & Co., London, England, and New York, N. Y. Ground mustard and spices	June 26, 1877	11	1114
5,101	Pioneer Tobacco Company, Brooklyn, N. Y. Plug chewing-tobacco	Aug. 28, 1877	12	354
5,102	Same.....same	Aug. 28, 1877	12	354
5,103	Same.....same	Aug. 28, 1877	12	354
5,104	Same.....same	Aug. 28, 1877	12	354
5,129	Same.....same	Sept. 6, 1877	12	397
	Platt, James H., jr., *et al.* (*See* Teter, William L., assignor.)			
5,136	Pleins, Francis M., Dubuque, Iowa. Concentrated soft-soap	Sept. 11, 1877	12	432
5,174	Plummer & Son, W. E., Buffalo, N. Y. Starch	Sept. 25, 1877	12	520
4,561	Pohalski, Henry, New York, N. Y. Cigarettes	Apr. 17, 1877	11	643
4,290	Pohalski, Pincus, New York, N. Y. Cigars, cigarettes, tobacco, and snuff	Jan. 23, 1877	11	113
4,486	Poole & Co., J. Morton, Wilmington, Del. Chilled rolls and rolls of other materials	Mar. 27, 1877	11	504
4,322	Popplein Silicated Phosphate Fertilizer Company, Baltimore, Md. Fertilizers	Jan. 30, 1877	11	155
5,440	Posner & Brother, S. I., New York, N. Y. Cigars	Dec. 18, 1877	12	1027
4,425	Post & Co., E. R., Newburg, N. Y. Pills	Mar. 6, 1877	11	377
5,223	Potter, Gilbert, jr., Brooklyn, N. Y. Axle-grease	Oct. 16, 1877	12	627
5,161	Potter, Sons & Co., Thomas, Philadelphia, Pa. Oil-cloths	Sept. 18, 1877	12	479
4,778	Powell & Coleman, New York, N. Y. Caramels and other confectionery	June 26, 1877	11	1114
4,581	Powell & Stevens, Waukegan, Ill. Sickle-grinders	Apr. 24, 1877	11	691
5,424	Pratt & Co., Charles, New York, N. Y. Refined petroleum	Dec. 11, 1877	12	982
4,592	Pratt & Farmer, New York, N. Y. Fishing-line	May 1, 1877	11	742
4,837	Preble & Co., J. Q., New York, N. Y. Writing-paper	July 10, 1877	12	54
5,336	Pressure Extract Company, Trenton, N. J. Apparatus for making extracts of coffee, tea, &c	Nov. 20, 1877	12	844
4,919	Proctor & Gamble, Cincinnati, Ohio. Soap	July 17, 1877	12	97
5,156	Same.....same	Sept. 18, 1877	12	478
5,157	Same.....same	Sept. 18, 1877	12	479
4,859	Purdy, Hiram, Burlington, Iowa. Heaters, stoves, and heating-pipe	July 17, 1877	12	95
4,946	Putnam, Anu M., Boston, Mass. Prepared cereals for making table beverages	July 24, 1877	12	140
5,272	Same.....same	Oct. 23, 1877	12	670
5,322	Pyle, James, New York, N. Y. Washing compounds	Nov. 13, 1877	12	799
5,118	Quaker Mill Company, Ravenna, Ohio. Oatmeal, cracked corn, cracked wheat, pearl barley, and farina	Sept. 4, 1877	12	397
4,365	Querard & Co., New York, N. Y. Preparation for polishing metal-ware and like articles	Feb. 13, 1877	11	251
4,975	Quigg & Allen, Atchison, Kans. Chewing-tobacco	July 31, 1877	12	190
4,444	Rahnstadt, Georg, New York, N. Y. Cigar	Mar. 13, 1877	11	4 1
5,369	Ralya, John J., Indianapolis, Ind. Hair-dye	Nov. 27, 1877	12	891
	Ramsdell, Charles P., *et al.* (*See* Teter, William L., assignor.)			
4,426	Reckhow Preserving Company, New York, N. Y., and Paterson, N. J. Relishes, embracing pickled fruits and vegetables, catsups, and salad dressings	Mar. 6, 1877	11	377
5,175	Reddick, William A., Niles, Mich. Hog-cholera medicine	Sept. 25, 1877	12	520
4,251	Reed & Barton, Taunton, Mass. Article of plated ware	Jan. 2, 1877	11	6
4,305	Same.....Plated ware	Jan. 23, 1877	11	113
4,304	Reed & Co., J. Lane, Dayton, Ohio. Plow	Jan. 23, 1877	11	113
4,594	Reed & Co., J. T., Boston Mass. Medicines	May 1, 1877	11	742
5,088	Reed & Sons, George H., assignors to B. F. Brown & Co., Boston, Mass. Dressings for boots and shoes	Aug. 28, 1877	12	354
5,018	Reich, Lorenz, New York, N. Y. Hungarian wines	Aug. 7, 1877	12	230
5,007	Renauld, Francois & Co., New York, N. Y. Brandy and wine	Aug. 7, 1877	12	230

List of trade-marks registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
5,057	Renauld, Francois & Co., New York, N. Y. Moët & Chandon champagne wine	Aug. 21, 1877	12	314
4,654	Reversible Collar Company, Boston, Mass. Collars, cuffs, and bosoms	May 15, 1877	11	834
4,532	Rhorer, Christian & Co., Saint Louis, Mo. Baking-powder	Apr. 10, 1877	11	601
5,142	Rhorer, George, Saint Louis, Mo. Baking-powder	Sept. 11, 1877	12	432
4,977	Richards & Co., John M., New York, N. Y. Concentrated food-supplement for horses and other animals	July 31, 1877	12	190
4,976	Same.....Medical preparation	July 31, 1877	12	190
5,385	Richardson & Co., Saint Louis, Mo. Cough-candy	Nov. 27, 1877	12	891
5,292	Richardson, George, Philadelphia, Pa. Shirts	Oct. 30, 1877	12	717
4,490	Richardson, John, Baltimore, Md. Smoking-tobacco	Mar. 27, 1877	11	504
5,425	Ricksecker, Theodore, New York, N. Y. Medicated shaving-soap	Dec. 11, 1877	12	982
5,143	Riggs, George, Newark, N. J. Linen fabrics	Sept. 11, 1877	12	432
4,958	Riquelme, Manuel, New Orleans, La. Smoking-tobacco	July 24, 1877	12	140
5,412	Same.....Cigars	Dec. 11, 1877	12	982
4,978	Riverside Mills Company, Crugers, N. Y. Baking-powder	July 31, 1877	12	190
4,427	Roach, James, Scranton, Pa. Preparation for the cure of croup	Mar. 6, 1877	11	377
4,814	Robert, J. Eugene, Hoboken, N. J. Watches	July 3, 1877	12	8
4,306	Roberts, Joseph, Baltimore, Md. Medical compound	Jan. 23, 1877	11	113
4,323	Robinson Brothers & Co., Boston, Mass. Soap	Jan. 30, 1877	11	155
4,388	Same.....same	Feb. 20, 1877	11	291
4,611	Same.....same	May 1, 1877	11	743
4,892	Same.....same	July 17, 1877	12	96
4,442	Robinson, Lord & Co., New York, N. Y. Matches	Mar. 13, 1877	11	421
4,698	Roederer, Louis, Rheims, France. Wine	June 5, 1877	11	973
4,699	Same.....same	June 5, 1877	11	973
4,779	Same.....same	June 26, 1877	11	1114
4,780	Same.....same	June 26, 1877	11	1114
5,058	Same.....same	Aug. 21, 1877	12	314
5,059	Same.....same	Aug. 21, 1877	12	314
5,060	Same.....same	Aug. 21, 1877	12	314
5,061	Same.....same	Aug. 21, 1877	12	314
5,062	Same.....same	Aug. 21, 1877	12	314
5,254	Same.....same	Oct. 23, 1877	12	669
5,383	Same.....same	Nov. 27, 1877	12	891
5,384	Same.....same	Nov. 27, 1877	12	891
4,632	Rogers & Brother, Waterbury, Conn. Plated ware	May 15, 1877	11	834
4,262	Rogers & Co., C. W., Philadelphia, Pa. Aluminous compound	Jan. 9, 1877	11	40
5,283	Rogers, J. Austin, Boston, Mass. Fluid medicinal compound or balsam	Oct. 30, 1877	12	717
5,176	Rorke & Co., Edward, New York, N. Y. Night-lamps	Sept. 25, 1877	12	520
4,428	Rosello, Pedro, New Orleans, La. Cigar	Mar. 6, 1877	11	377
5,082	Rosenberg & Sons, D., New York, N. Y. Varnishes, japans, and fresco-size	Aug. 21, 1877	12	315
5,239	Same.....Size for house and fresco paintings	Oct. 16, 1877	12	628
4,825	Ross, Turner & Co, Boston, Mass. Linen machine-thread	July 3, 1877	12	8
4,366	Rothschild, Ludwig, New York, N. Y. Buttons and dress-trimming	Feb. 13, 1877	11	251
4,927	Royal Baking Powder Company, New York, N. Y. Flavoring-extracts	July 24, 1877	12	139
5,258	Rubber Cushioned Axle Company, New York, N. Y. Axles and axle-boxes	Oct. 23, 1877	12	669
4,566	Rumford Chemical Works, Providence, R. I. Bread preparations	Apr. 17, 1877	11	643
4,793	Same.....Acid phosphate	June 26, 1877	11	1115
5,107	Rumsey & Co., Aaron, Buffalo, N. Y. Leather	Aug. 28, 1877	12	354
4,593	Russell Cutlery Company, John, Turner's Falls, Mass. Pen and pocket knives	May 1, 1877	11	742
4,739	Russell, Mary A., New Bedford, Mass. Cosmetics	June 12, 1877	11	1012
4,445	Ryer, John, A. H. Van Hoesen, and S. Hardick, executors of C. B. Hardick, deceased, Brooklyn, N. Y. Pumps	Mar. 13, 1877	11	421
5,241	Sanford Manufacturing Company, Chicago, Ill. Ink	Oct. 16, 1877	12	628
4,493	Sanford, Samuel T. W., Long Island City, N. Y. Medical compound	Mar. 27, 1877	11	504
4,619	Saratoga Vichy Springs Company, Saratoga Springs, N. Y. Mineral water known as "Vichy"	May 8, 1877	11	791
4,921	Sato, Momotaro, New York, N. Y. Tea	July 17, 1877	12	97
4,285	Saugatuck Manufacturing Company, Saugatuck, Conn. Buttons	Jan. 16, 1877	11	71
5,054	Sautz Brothers & Co., Buffalo, N. Y. Soap	Aug. 21, 1877	12	314
4,633	Sawyer, Catharine, Rockland, Me. Medical compound	May 15, 1877	11	834
5,144	Saxlehner, Andreas, Pest, Austria. Mineral water	Sept. 11, 1877	12	432
	Scharff, A. (*See* Scharff, L. and A.)			
5,302	Scharff, L. and A., Saint Louis, Mo. Whisky	Nov. 6, 1877	12	757
5,460	Schieffelin & Co., W. H., New York, N. Y. Chest-protectors	Dec. 25, 1877	12	1078
4,821	Schiele & Co., Lewis, Newark, N. J. Bustles, paniers, or train-supporters	July 3, 1877	12	8
4,681	Schieren, Charles A., Brooklyn, N. Y. Leather belting and lace leather	May 22, 1877	11	881
4,324	Schmidlapp & Co., Cincinnati, Ohio. Whisky	Jan. 30, 1877	11	155
5,008	Schmidt, Christian A., Stapleton, N. Y. Drapery and upholstery trimmings	Aug. 7, 1877	12	230
4,815	Schmitt, Joseph, New York, N. Y. Cigars and cigarettes	July 3, 1877	12	8
4,928	Schneider, Philipp, New York, N. Y. Cigar-box	July 24, 1877	12	139
4,582	Schultz & Co., Zanesville, Ohio. Soap	Apr. 24, 1877	11	691
4,350	Schultze, Emil, Jersey City Heights, N. J. Wine	Feb. 6, 1877	11	199
5,009	Schumacher, Ferdinand, Akron, Ohio. Flour	Aug. 7, 1877	12	230
5,089	Schutt, Kelsey & Co., New York, N. Y. Birch-mead	Aug. 28, 1877	12	354
4,979	Schwachhofer, John T., Hunter's Point, N. Y. Polishing-soap	July 31, 1877	12	190
4,533	Schwartz, Adam, New York, N. Y. Steam and hydraulic packings	Apr. 10, 1877	11	601
4,491	Schwob, Adolphe, New York, N. Y. Watches	Mar. 27, 1877	11	504
4,367	Scott & Son, N. R., Worcester, Mass. Tooth-powder	Feb. 13, 1877	11	251
5,426	Scott, Quincy A., Pittsburg, Pa. Rubber goods	Dec. 11, 1877	12	982
4,541	Scott, Winchester D., Philadelphia, Pa. Hog medicine	Apr. 17, 1877	11	642
5,084	Sears & Co., C. E., Circleville, Ohio. Canned and dried corn	Aug. 21, 1877	12	315
4,595	Seiberling, John F., Akron, Ohio. Harvesters and mowers	May 1, 1877	11	742
4,325	Seidenberg & Co., Key West, Fla., and New York, N. Y. Tobacco	Jan. 30, 1877	11	155
4,562	Seidenberg & Co., New York, N. Y., and Key West, Fla. Cigars	Apr. 17, 1877	11	643
4,278	Sellers & Co., R. E., Pittsburg, Pa. Medical compound	Jan. 16, 1877	11	71
4,980	Semmes & Co., B. J., Memphis, Tenn. Smoking and chewing tobacco, cigars, and cigarettes	July 31, 1877	12	190
4,981	Same.....Spirituous liquors and wines	July 31, 1877	12	190
5,309	Sewell, William E., New Orleans, La. Illuminating-oil or burning-fluid	Nov. 13, 1877	12	798
5,127	Shepard, George M., Chicago, Ill. Cleaning and polishing fluid for wood and japanned surfaces	Sept. 4, 1877	12	397
5,182	Sheppard & Co., Isaac A., Philadelphia, Pa. Hot-air furnace	Sept. 25, 1877	12	520
5,158	Sherwood, James H., Brooklyn, N. Y. Baking-powder	Sept. 18, 1877	12	479
5,353	Shipman's Sons, Asa L., New York, N. Y. Adhesive paste	Nov. 20, 1877	12	844
5,337	Shoemaker & Co., M. L. (limited), Philadelphia, Pa. Fertilizers	Nov. 20, 1877	12	844

Alphabetical list of trade-marks registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
4,429	Sibley, Freeman K., Waltham, Mass. Abrasive cloth, paper, or leather	Mar. 6, 1877	11	377
5,371	Simons & Frowein, Eberfeld, Germany. Woven cotton and woolen fabrics	Nov. 27, 1877	12	891
5,090	Simpson & Co., New York, N. Y. Piano-fortes	Aug. 28, 1877	12	351
5,183	Simpson, Greenlief W., Somerville, Mass. Hermetically-sealed butter	Sept. 25, 1877	12	520
4,474	Singer & Breban, Philadelphia, Pa. Fertilizer	Mar. 20, 1877	11	461
4,860	Sloan, Johnson & Co., Peoria, Ill. Spices	July 17, 1877	12	95
4,838	Smith & Co., F. E., Brooklyn, N. Y. Flour	July 10, 1877	12	54
4,959	Smith & Powell, Brooklyn, N. Y. Carbonated beverages	July 24, 1877	12	140
5,093	Smith & Rising, Ottawa, Ill. Cigars	Aug. 28, 1877	12	351
4,700	Smith & Sons, Thomas C., Green Point, N. Y. Porcelain and other pottery wares	June 5, 1877	11	973
5,338	Smith & Wicks, Baltimore, Md. Packed oysters, fruits, and vegetables	Nov. 20, 1877	12	844
4,909	Smith American Organ Company, Boston, Mass. Artificial-ivory keys for organs, &c	July 17, 1877	12	97
4,368	Smith Brothers, San Francisco, Cal., and New York, N. Y. Borax	Feb. 13, 1877	11	251
4,563	Smith, Charles H., New York, N. Y. Table-sauce	Apr. 17, 1877	11	643
5,461	Smith, Edward A., Brooklyn, N. Y. Cigars, cigarettes, and smoking and chewing tobacco	Dec. 25, 1877	12	1078
5,462	Same.....same	Dec. 25, 1877	12	1078
4,947	Smith, Ferdinand, Providence, R. I. Cigars	July 24, 1877	12	140
5,301	Same.....same	Nov. 6, 1877	12	757
4,446	Smith, Freebern G., New York, N. Y. Piano-fortes	Mar. 13, 1877	11	421
4,447	Same.....Organ	Mar. 13, 1877	11	421
4,448	Same.....Piano-fortes	Mar. 13, 1877	11	421
5,044	Smith, Henry M., Spuyten Duyvil, N. Y. Preparation of cocoa	Aug. 14, 1877	12	270
4,701	Smith, Kline & Co., Philadelphia, Pa. Liniment	June 5, 1877	11	973
4,430	Smith, Matthias M., New York, N. Y. Tobacco, cigars, and cigarettes	Mar. 6, 1877	11	377
	Smith, R. (*See* Burrell & Smith.)			
4,929	Smith, Robert W., New York, N. Y. Piano-fortes	July 24, 1877	12	139
4,930	Same.....same	July 24, 1877	12	139
4,393	Smith, Sullivan N., jr., Dayton, Ohio. Medicinal preparation	Feb. 10, 1877	11	291
5,308	Sneider, Robert, Brooklyn, N. Y. Boxes	Nov. 13, 1877	12	798
4,583	Soleliac & Sons, A., New York, N. Y. Ribbons	Apr. 24, 1877	11	691
4,720	Southern White Lead Company, Saint Louis, Mo. White lead	June 12, 1877	11	1012
4,634	Spaulding & Merrick, Chicago, Ill. Smoking-tobacco	May 15, 1877	11	834
5,370	Same.....same	Nov. 27, 1877	12	891
4,682	Speed & Co., J. B., Louisville, Ky. Salt	May 22, 1877	11	881
4,709	Spence Brothers & Co., Cincinnati, Ohio. Fine-cut chewing-tobacco	June 5, 1877	11	973
4,710	Same.....same	June 5, 1877	11	973
4,394	St. Amant & Son, D., New York, N. Y. Olive-oil	Feb. 20, 1877	11	291
4,395	Same.....same	Feb. 20, 1877	11	291
5,184	Standard Oil Paint Company, Cleveland, Ohio. Paints	Sept. 25, 1877	12	520
5,441	Standard Yeast Company, Cincinnati, Ohio. Yeast	Dec. 18, 1877	12	1027
4,861	Stanwood, John J., Gloucester, Mass. Cured fish	July 17, 1877	12	95
4,492	Stark Mills, Manchester, N. H. Toweling	Mar. 27, 1877	11	501
4,476	St. Charles Starch Company, Saint Charles, Mo. Starch and corn-starch	Mar. 20, 1877	11	461
5,255	Steel & Co., Edward T., Philadelphia, Pa. Cloths and woolens	Oct. 23, 1877	12	669
4,263	Steele & Price, Chicago, Ill., Cincinnati, Ohio, and Saint Louis, Mo. Dentifrices	Jan. 9, 1877	11	40
4,307	Same.....Toilet-soap and other toilet articles	Jan. 23, 1877	11	113
4,308	Same.....Yeast and yeast-powder	Jan. 23, 1877	11	113
4,431	Same.....Yeast-powder a d yeast	Mar. 6, 1877	11	377
4,508	Steinwender & Sellner, Saint Louis, Mo. Whisky	Mar. 27, 1877	11	505
5,030	Stephani & Co., A., New York, N. Y., and Philadelphia, Pa. Macaroni	Aug. 14, 1877	12	270
5,091	Stephens' Son, A., Cleveland, Ohio. Roasted coffee	Aug. 28, 1877	12	354
5,092	Same.....same	Aug. 28, 1877	12	354
5,459	Sterling, John, Kansas City, Mo. Medical compound	Dec. 25, 1877	12	1078
5,354	Sternberger, Samuel, Philadelphia, Pa. Shirts, shirt-fronts, drawers, and overalls	Nov. 20, 1877	12	841
4,264	Stevens & Groom, San José, Cal. Canned and preserved fruits and vegetables	Jan. 9, 1877	11	40
4,509	Stewart & Co., A. T., New York, N. Y. Spool-cotton	Mar. 27, 1877	11	505
4,948	Stewart, John, Manchester, Iowa. Butter	July 24, 1877	12	140
4,596	St. Louis Rail Fastening Company, Saint Louis, Mo. Railroad spikes, fish-plates, bolts and nuts	May 1, 1877	11	742
4,894	Stocks, George J., Philadelphia, Pa. Button-holder	July 17, 1877	12	96
4,369	Stone & Co., James H., Washington, D. C. Writing-fluid	Feb. 13, 1877	11	251
5,458	Stowell, Daniel, and C. S. Clerke, Boston, Mass. Medical compounds	Dec. 25, 1877	12	1078
4,899	Strahan, Hodgson & Co., Troy and New York, N. Y. Collars and cuffs	July 17, 1877	12	97
4,291	Straiton & Storm, New York, N. Y. Cigars and tobacco	Jan. 23, 1877	11	113
4,781	Same.....Cigars	June 26, 1877	11	1114
4,862	Same.....same	July 17, 1877	12	95
4,949	Same.....Cigars, cigarettes, and smoking-tobacco	July 24, 1877	12	140
5,031	Same.....same	Aug. 14, 1877	12	270
5,032	Same.....same	Aug. 14, 1877	12	270
5,194	Same.....same	Oct. 2, 1877	12	5
5,195	Same.....same	Oct. 2, 1877	12	5
5,442	Same.....same	Dec. 18, 1877	12	1027
4,893	Straus, Samuel, New York, N. Y. Cigars	July 17, 1877	12	96
4,432	Strawn, David G., Boston, Mass. Perfumes	Mar. 6, 1877	11	377
5,193	Strobel, Robert S., Baltimore, Md. Cigars	Oct. 2, 1877	12	5
5,256	Same.....same	Oct. 23, 1877	12	669
5,257	Same.....same	Oct. 23, 1877	12	669
4,412	Styles, Laban C., New York, N. Y. Envelopes and letter-paper	Feb. 27, 1877	11	333
5,224	Suez, Charles, Paris, France. Dentifrices	Oct. 16, 1877	12	627
4,494	Sullivan & Burk, Detroit, Mich. Cigars	Mar. 27, 1877	11	504
4,279	Sullivan, Patrick J., Brooklyn, N. Y. Cigars and tobacco	Jan. 16, 1877	11	71
4,740	Swasey, John A., Boston, Mass. Pen-holder	June 12, 1877	11	1012
4,702	Swift & Courtney & Beecher Company, Wilmington, Del. Matches	June 5, 1877	11	973
4,783	Talbot, James S., Boston, Mass. Medicinal preparations for animals	June 26, 1877	11	1114
4,782	Tailer, Robert W., New York, N. Y. Wines	June 26, 1877	11	1114
4,475	Tapling, George P., Brooklyn, N. Y. Liquid for removing grease and other stains from cloth, &c	Mar. 20, 1877	11	461
4,882	Taylor, Alfred B., Philadelphia, Pa. Cologne	July 17, 1877	11	96
5,128	Teichman, Isaac, New York, N. Y. Cigars	Sept. 4, 1877	12	397
5,450	Same.....same	Dec. 18, 1877	12	1028
4,616	Teter, William L., Philadelphia, Pa., assignor to J. H. Platt, jr., Virginia, and C. P. Ramsdell, Petersburg, Va. Illuminating-oil	May 8, 1877	11	791
5,137	Teuscher & Gerosheimer, New York, N. Y. Cigars	Sept. 11, 1877	12	432
4,408	Thedford & Co., M. A., Chattanooga, Tenn. Medical compound	Feb. 27, 1877	11	332
4,741	Theile & Quack, Elberfeld, Germany. Cutlery	June 12, 1877	11	1012

List of trade-marks registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
4,693	Thiet, Charles, Saint Louis, Mo. Bitters	May 28, 1877	11	927
5,443	Thomas, John W., New Orleans, La. Toilet-soaps	Dec. 18, 1877	12	1028
4,534	Thomas, Roberts & Stevenson & Co., Philadelphia, Pa. Cooking-stove and range	Apr. 10, 1877	11	601
4,328	Thompson, Ebenezer K., Titusville, Pa. Medical compound	Jan. 30, 1877	11	115
5,130	Thompson, Fry & Co., Philadelphia, Pa. Canned goods	Sept. 4, 1877	12	397
4,703	Thompson, Mary E., Chicago, Ill. Ladies' hair goods	June 5, 1877	11	973
5,225	Thompson, Moore & Co., New York, N. Y. Smoking and chewing tobacco	Oct. 16, 1877	12	627
	Thompson, P. (*See* Thompson, W. and P.)			
4,683	Thompson, William, New York, N. Y., and Dublin, Ireland. Compound for fining, purifying, and mellowing spirituous liquors	May 22, 1877	11	881
4,914	Thorndike, James D., Boston, Mass. Medicinal preparation	July 17, 1877	12	97
4,226	Thourault & Co., P., New York, N. Y. Cigarette boxes and packages	Jan. 16, 1877	11	71
5,146	Thurber & Co., H. K. & F. B., New York, N. Y. Cigars	Sept. 11, 1877	12	432
5,312	Same.....Plug-tobacco	Nov. 13, 1877	12	798
4,637	Tiffany & Co., New York, N. Y. Jewelry and watches	May 15, 1877	11	834
4,638	Same.....Bronzes	May 15, 1877	11	834
4,639	Same.....Silver and plated ware	May 15, 1877	11	834
5,064	Same.....Stationery and fancy goods connected therewith	Aug. 21, 1877	12	314
4,329	Tifft & Howard, New York, N. Y. Boxes for collars	Jan. 30, 1877	11	155
4,920	Tilden, Henry A., New Lebanon, N. Y. Medical compound	July 17, 1877	12	97
4,684	Topliff, Cyrus L., Brooklyn, N. Y. Fence strip and cap	May 22, 1877	11	881
4,597	Same.....same	May 1, 1877	11	742
4,523	Tousey & Co., Omer, Indianapolis, Ind. Soap	Apr. 3, 1877	11	535
4,711	Tréfousse & Co., Chaumont, France. Kid gloves	June 5, 1877	11	973
4,712	Same.....same	June 5, 1877	11	973
4,785	Same.....Gloves	Apr. 24, 1877	11	691
4,586	Same.....same	Apr. 24, 1877	11	691
4,655	Trommer Extract of Malt Company, Fremont, Ohio. Extract of malt	May 15, 1877	11	831
5,386	Tweedy Manufacturing Company, Danbury, Conn. Hats and bonnets	Nov. 27, 1877	12	891
5,451	Ulmann & Co., Bernhard, New York, N. Y. Zephyr worsted, worsted, and woolen yarns and worsted embroideries	Dec. 18, 1877	12	1028
5,418	Underwood & Co., William, Boston, Mass. Canned fish chowder	Dec. 11, 1877	12	982
4,931	Union Manufacturing Company, Lockport, N. Y. Hoes	July 24, 1877	12	139
5,396	Van Buskirk, Roswell, Newark, N. J. Medicines	Dec. 4, 1877	12	943
5,413	Van Riper & Co., P. H., New York, N. Y. Butter	Dec. 11, 1877	12	982
5,414	Same.....same	Dec. 11, 1877	12	982
5,196	Van Schaick, Benjamin A., Philadelphia, Pa. Plain-plug chewing-tobacco	Oct. 2, 1877	12	5
4,450	Van Wagoner & Williams, New York, N. Y. Door and gate springs	Mar. 13, 1877	11	422
5,147	Vega & Bernheim, New York, N. Y. Leaf-tobacco	Sept. 11, 1877	12	432
4,950	Vega, Rafael, Brooklyn, N. Y. Cigars	July 24, 1877	12	140
4,510	Venable & Co., S. W., Petersburg, Va. Plug-tobacco	Mar. 27, 1877	11	505
5,108	Vogeler & Co., A., Baltimore, Md. Fluid medicinal preparation	Aug. 28, 1877	12	354
4,742	Von Berg, Mathilde S., Philadelphia, Pa. Effervescent beverage	June 12, 1877	11	1012
5,033	Vordick, August H., Saint Louis, Mo. Medical compounds	Aug. 14, 1877	12	270
4,449	Waite, Enoch, Franklin, Mass. Striped or figured felt fabrics	Mar. 13, 1877	11	421
5,323	Walcott, Samuel T., Baltimore, Md. Medical preparations	Nov. 13, 1877	12	799
5,034	Walden, Whitten & Co., Philadelphia, Pa. Gin	Aug. 14, 1877	12	270
4,884	Walker & Co., J., Cincinnati, Ohio. Ales, porter, and brown stout	July 17, 1877	11	96
4,434	Walker Brothers, Salt Lake City and Ogden City, Utah. Teas	Mar. 6, 1877	11	377
4,721	Walker Brothers & Co., J. W., Cincinnati, Ohio. Mixed gloss-paint	June 12, 1877	11	1012
4,351	Wallace & Postlewait, Columbus Grove, Ohio. Medical compound	Feb. 6, 1877	11	199
5,397	Wanzer & Co., R. M., Hamilton, Canada, and Buffalo, N. Y. Sewing-machine	Dec. 4, 1877	12	943
5,243	Warburg & Co., Edward, New York, N. Y. Black silk	Oct. 16, 1877	12	628
5,313	Warder & Barnett, Springfield, Ohio. Flour	Nov. 13, 1877	12	798
5,315	Same.....same	Nov. 13, 1877	12	798
4,389	Ward's Sons, S. W. H., New York, N. Y. Paper collars	Feb. 20, 1877	11	291
4,414	Warren, Daniel, Oxford, Mass. Cotton warp or twine	Mar. 6, 1877	11	376
4,704	Warner Brothers, New York, N. Y., and Bridgeport, Conn. Stocking-supporter	June 5, 1877	11	973
4,863	Warnick & Brown, Utica, N. Y. Cigars	July 17, 1877	12	96
5,148	Warnick & Reid, Amsterdam, N. Y. Croup-medicine	Sept. 11, 1877	12	432
4,598	Warren & Co., C. C., Toledo, Ohio. Baking-powder	May 1, 1877	11	742
4,548	Warren Chemical and Manufacturing Company, Boston, Mass. Roofing and sheathing felts	Apr. 17, 1877	11	642
5,387	Warren, Lober & Co., Philadelphia, Pa. Roofing cement and felt	Nov. 27, 1877	12	891
5,274	Washington Manufacturing Company, Troy, N. Y. Collars and cuffs	Oct. 23, 1877	12	670
5,388	Washington Mills, Lawrence, Mass. Woolen and worsted fabrics for gentlemen's clothing	Nov. 27, 1877	12	892
5,067	Watson & McGill, Petersburg, Va. Smoking and chewing tobacco	Aug. 21, 1877	12	314
5,068	Same.....same	Aug. 21, 1877	12	314
5,069	Same.....same	Aug. 21, 1877	12	314
5,070	Same.....same	Aug. 21, 1877	12	314
4,883	Watts, Parker & Co., New York, N. Y., and Cincinnati, Ohio. Hams, lard, and other pork products	July 17, 1877	11	96
4,396	Weaver, John E., Lancaster, Pa. Soap	Feb. 20, 1877	11	291
5,415	Webb & Co., J. G., Saint Louis, Mo. Liver-medicine	Dec. 11, 1877	12	982
4,850	Weikel & Smith Spice Company, Philadelphia, Pa. Roasted coffee	July 3, 1877	12	9
4,858	Wellman, Peck & Co., San Francisco, Cal. Petroleum or coal oils	July 17, 1877	12	95
4,910	Wells, Richardson & Co., Burlington, Vt. Preparation for coloring butter	July 17, 1877	12	97
	Wenck, Margaret E. (*See* Wenck, George J., assignor.)			
4,915	Wenck, George J., assignor to M. E. Wenck, New York, N. Y. Medicinal food	July 17, 1877	12	97
4,816	Werlé & Co., Rheims, France. Champagne wine	July 3, 1877	12	8
4,817	Same.....same	July 3, 1877	12	8
5,065	Same.....same	Aug. 21, 1877	12	314
5,066	Same.....same	Aug. 21, 1877	12	314
5,071	Same.....same	Aug. 21, 1877	12	314
5,011	Werner, August, New York, N. Y. Wine	Aug. 7, 1877	12	230
5,398	Wertheimer, L. and E., New York, N. Y., and San Francisco, Cal. Plug-tobacco	Dec. 4, 1877	12	943
5,149	Wesp-Lantz Brothers & Co., Buffalo, N. Y. Starch	Sept. 11, 1877	12	432
5,159	Wetzell Brothers, Grand Rapids and Lockwood, Mich. All sawed lumber except shingles	Sept. 18, 1877	12	479
5,400	Weyman, B. Frank, Pittsburg, Pa. Cigar	Dec. 4, 1877	12	943
4,599	Whalen, Daniel, New York, N. Y. Cigars	May 1, 1877	11	742
4,375	Whipple, Lyman W., New York, N. Y. Compound textile fabrics	Feb. 13, 1877	11	252
4,542	Whitall, Tatum & Co., New York, N. Y., and Philadelphia, Pa. Nursing-bottle	Apr. 17, 1877	11	642
4,535	White, Samuel S., Philadelphia, Pa. Dental fillings	Apr. 10, 1877	11	601
4,376	Whiting, Dwight, Boston, Mass. Liniment	Feb. 13, 1877	11	252

List of trade-marks registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
4,265	Whiting, John L., Boston, Mass. Brush	Jan. 9, 1877	11	40
5,131	Whitney & Raymond, Cleveland, Ohio. Reed-organs	Sept. 4, 1877	12	397
5,361	Whittier, Fuller & Co., San Francisco, Cal. White lead	Nov. 20, 1877	12	844
4,831	Wicke & Co., William, New York, N. Y. Cigar-boxes	July 3, 1877	12	9
5,139	Same.....same	Sept. 11, 1877	12	432
4,524	Wickes, Eliphalet, Englewood, N. J. Refined petroleum-oil	Apr. 3, 1877	11	555
4,309	Wiebusch, Frederick, New York, N. Y. Cutlery	Jan. 23, 1877	11	113
4,951	Wiggin & Stevens, Malden, Mass. Flint, sand, emery, and match papers and cloths	July 24, 1877	12	140
5,012	Wilbur, Ezra R., Fall River, Mass. Medical compound	Aug. 7, 1877	12	230
5,105	Wilcox, William, Worcester, Mass. Sewing-machine needles	Aug. 28, 1877	12	354
5,399	Wilder, Luke A., Boston, Mass., and A. Ferguson, New York, N. Y. Disinfectant and deodorizer	Dec. 4, 1877	12	943
4,292	Wilkens & Co., Henry, Baltimore, Md. Smoking-tobacco	Jan. 23, 1877	11	113
5,199	Willets & Co., S. T., New York, N. Y. Cigars	Oct. 2, 1877	12	6
5,215	Same.....same	Oct. 16, 1877	12	628
5,395	Wilmot Manufacturing Company, Bridgeport, Conn. Lamp-burner	Dec. 4, 1877	12	943
4,255	Wilson Sewing Machine Company, Chicago, Ill. Sewing-machine	Jan. 2, 1877	11	6
5,273	Winslow & Myrick, Boston, Mass. Smoking and chewing tobacco	Oct. 23, 1877	12	670
4,960	Wolf, Moses A., Chicago, Ill. Cigars	July 24, 1877	12	140
5,119	Wolfe, Joel B., New York, N. Y. Cordial, designated "Schnapps"	Sept. 4, 1877	12	397
5,013	Wolters, Charles, Philadelphia, Pa. Malt liquors	Aug. 7, 1877	12	230
5,244	Woodruff, James E., Quincy, Ill. Dry hop-yeast	Oct. 16, 1877	12	628
5,226	Woodward & Dwight, Saint Louis, Mo. Flour	Oct. 16, 1877	12	627
4,567	Woolner Brothers, Peoria, Ill. Whiskies	Apr. 17, 1877	11	643
4,568	Same.....same	Apr. 17, 1877	11	643
4,982	Wright & Brother, Frank, Washington, D. C. Toilet wash	July 31, 1877	12	191
5,227	Wrisley, George A., Chicago, Ill. Laundry-soap	Oct. 16, 1877	12	627
4,443	Ybor & Co., V. Martinez, New York, N. Y. Cigars and tobacco	Mar. 13, 1877	11	421
4,377	Yost & Co., John C., Cincinnati, Ohio. Whisky	Feb. 13, 1877	11	252
4,983	Same.....same	July 31, 1877	12	191
4,932	Young, Ladd & Coffin, New York, N. Y. Perfumery	July 24, 1877	12	139
5,106	Same.....same	Aug. 28, 1877	12	354
5,083	Young, Patterson & Co., Minneapolis, Minn. Bitters	Aug. 21, 1877	12	315
5,259	Zeilin & Co., J. H., Macon, Ga. Medicine	Oct. 23, 1877	12	669
5,427	Zeilin & Co., J. H., Philadelphia, Pa. Medicinal preparations	Dec. 11, 1877	12	982
4,640	Zuricalday & Arguimbau, New York, N. Y. Licorice paste	May 15, 1877	11	834

DISCLAIMERS.

No.	Name, residence, and invention.	Date.	Official Gazette. Vol.	Page.
5,894	Frost, Charles H., deceased, J. M. Frost, and W. A. Hunt, executors and assignors, by mesne assignments, to J. S. Perry, Albany, N. Y. Stove.....(Disclaimer filed)..	Jan. 15, 1877	11	40
184,611	Gorham, John M., Cleveland, Ohio. Wash-board.....(Disclaimer filed)..	Apr. 7, 1877	11	602
88,971	Matthews, E. G., Newton, assignor to E. F. Holbrook, Dorchester, Mass. Seed sower and planter. (Disclaimer filed)	Jan. 2, 1877	11	6
185,773	Minor, Thomas, Brooklyn, and J. Rae, New York, N. Y. Indicator for steam-engines..(Disclaimer filed)	Sept. 1, 1877	12	355
1,606	Putnam, Henry W., New York, N. Y. Bottle-stopper fastening.....(Disclaimer filed)..	Jan. 19, 1877	11	114
183,706	Richardson, Benjamin F., Cincinnati, Ohio. Vehicle-axle.....(Disclaimer filed)..	Feb. 5, 1877	11	199
17,899	Slawson, John B., New York, N. Y. Passenger-fare box.....(Disclaimer filed)..	Sept. 6, 1877	12	397
4,418	Voelter, Henry, Heidenheim, Würtemberg, assignor to A. Pagenstecher, New York, N. Y. Reducing wood to paper-pulp.....(Disclaimer filed)..	Aug. 24, 1877	12	355

EXTENSIONS.

No.	Name of inventor, invention, or discovery.	Date.
Reissue No. 4,202	Bussell, Erastus T., Indianapolis, Ind. India-rubber and steel springs.....(Reissued Dec. 13, 1870)..	Nov. 29, 1853
Reissue No. 4,418	Voelter, Henry, Heidenheim, Germany. Reducing wood to paper-pulp.....(Reissued Aug. 29, 1870)..	Aug. 10, 1858

LIST OF LABELS REGISTERED DURING THE YEAR 1877.

No.	Name, residence, and title.	Date.	Official Gazette.	
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1,036	Abbey & Son, S., Rondout, N. Y. "Factory Salt Ashton"	Apr. 17, 1877	11	643
1,228	Allen & Co., John A., New York, N. Y. "Corn & Rock"	Nov. 6, 1877	12	757
1,027	Allen, John H., and Richard A. Cunningham, New York, N. Y. "Brain Food"	Apr. 10, 1877	11	601
1,079	Ammon, J. Guy, Philadelphia, Pa. "Dressing for Ladies' and Children's Boots and Shoes"	June 5, 1877	11	973
954	Babcock & Co., John, Boston, Mass. "Babcock's Best Wearing Body Varnish"	Jan. 23, 1877	11	113
1,192	Bailey, R. S., Nashville, N. Y. "A New Design, the Most Perfect System for cutting Ladies' and Children's Waists, &c."	Oct. 9, 1877	12	36
1,263	Bailey, Thomas B., Milford, Mass. "Bucklin's Triple Extract Bouquets"	Nov. 27, 1877	12	892
1,041	Barbour, Thomas, Paterson, N. J. "Barbour's No. 12, 10 Cent Ball, Best Irish Flax"	May 1, 1877	11	743
964	Bassett, Albert G., Rochester, N. Y. "Horehound Troches"	Feb. 6, 1877	11	199
1,190	Bassett, D. H., Pittsfield, Mass. "Bassett's Combination Burgundy Pitch Plaster"	Sept. 25, 1877	12	520
1,092	Bay State Shoe and Leather Company, New York, N. Y. "This Sole is Fastened with Screws"	June 26, 1877	11	1115
1,042	Beam, Joseph C., Johnstown, Pa. "Beam's Domestic Medicines"	May 1, 1877	11	743
1,128	Bedford Alum and Iodine Springs Company, Lynchburg, Va. "Nature's Remedy, Bedford Alum and Iodine Moss"	July 31, 1877	12	191
998	Beers, Charles H., New Haven, Conn. "Solidified Glycerine"	Mar. 13, 1877	11	422
1,043	Belden, James L., Geddes, N. Y. "Dr. N. Weaver's Concentrated Extract Fireweed or Scrofula Cure"	May 1, 1877	11	743
981	Beleshe, J., Philadelphia, Pa. "Morocco Moorish Cigarettes"	Feb. 20, 1877	11	291
1,170	Bendell, J. A., New York, N. Y. "Misfit Carpets"	Sept. 4, 1877	12	397
1,177	Benter, Henry, Allegheny, Pa. "Benter's Laundry Indigo Blueing"	Sept. 11, 1877	12	432
1,093	Berry, Henry C., Chicago, Ill. "Crayon Indestructible, D'Bacrri"	June 26, 1877	11	1115
1,057	Biedenfeld, Caroline, New York, N. Y. "The K. Imperial Viennese Purgative Blood Purifying Specifics"	May 15, 1877	11	834
1,187	Blank, Oscar, Saint Louis, Mo. "Dr. Blank's Black Medicine, &c."	Sept. 25, 1877	12	520
1,217	Blankman, Julia, New York, N. Y. "The Magnetic Remedy"	Oct. 30, 1877	12	717
1,145	Blumenson & Co., Ig., New Orleans, La. "C. O. D. One Price Clothing House"	Aug. 7, 1877	12	230
1,308	Boland, James, Chicago, Ill. "Boland's Aromatic Bitter Wine of Iron"	Dec. 18, 1877	12	1028
1,171	Bornstein, Henry, Boston, Mass. "Henry Bornstein, Inventor and Patentee of the Popular and Celebrated Pin Hook"	Sept. 4, 1877	12	397
1,038	Brooke, Nathan, Philadelphia, Pa. "Unbolted Wheat Flour from Selected Grain"	Apr. 24, 1877	11	691
1,048	Brooks, George P., Boston, Mass. "Chocolated Tablets of Chlorate Potass"	May 8, 1877	11	791
1,307	Bross, Edward, Baltimore, Md. "White Ash Cigar"	Dec. 18, 1877	12	1028
1,205	Brower, Bloomfield, New York, N. Y. "Trefoil Inkstand"	Oct. 16, 1877	12	628
1,160	Same..... "Lap Tablets"	Aug. 28, 1877	12	354
1,117	Brown, Richard L., Rockville, N. C. "Richard L. Brown's Horse Eye Water"	July 17, 1877	12	97
991	Browne, George H., New Haven, Conn. "Scratch My Back"	Mar. 6, 1877	11	377
982	Bryant, Oliver G., Chicago, Ill. "Reese's Patent Adjustable Stencil Letters"	Feb. 20, 1877	11	291
1,013	Bugbee & Co., E., Somerville, Mass. "U Fragrance; it Cleanses the Teeth, Hardens the Gums, and Deodorizes the Breath"	Mar. 27, 1877	11	505
1,102	Button Brothers & Co., New York, N. Y. "Hermetical Lunch Box"	July 3, 1877	12	9
1,250	Same..... "Damson Bun Pie"	Nov. 13, 1877	12	799
1,122	Button, Clara M., Albany, N. Y. "Button's Pearl Breakfast Hominy"	July 24, 1877	12	140
1,123	Same..... "Button's Superior White Crushed"	July 24, 1877	12	140
965	Buzby, Albert G., Philadelphia, Pa. "Postal Paper"	Feb. 6, 1877	11	199
1,324	Carter, Dinsmore & Co., Boston, Mass. "Carter's Raven Black Ink"	Dec. 25, 1877	12	1078
1,049	Cassidy, James J., Boston, Mass. "Asiatic Insect Destroyer"	May 8, 1877	11	791
946	Clark, Sell & Co., Liberty, Ind. "Clark's Harness Oil Blacking"	Jan. 16, 1877	11	71
1,033	Clausen & Son, H., New York, N. Y. "H. Clausen & Son, Export Lager Beer"	Apr. 17, 1877	11	643
1,180	Clements, J. B., Cincinnati, Ohio. "Sancho"	Sept. 11, 1877	12	432
947	Clinton Wire Cloth Company, Clinton, Mass. "Painted Window Screen Cloth"	Jan. 16, 1877	11	71
1,004	Same..... "Clinton Window Screen Wire Cloth"	Mar. 20, 1877	11	461
1,129	Coaney, George D., Bayonne, N. J. "Certain Cure for Headache"	July 31, 1877	12	191
1,130	Same..... "Marvelous Cure for Chills and Fever"	July 31, 1877	12	191
1,161	Coes, Loring, and Melvin O. Whittier, Worcester, Mass. "L. Coes' Mechanic's Screw Wrench"	Aug. 28, 1877	12	351
1,109	Colborne & Co., L. H., New York, N. Y. "Ceylon Balsam"	July 10, 1877	12	55
1,073	Collar, Alexander, and Henry T. Matthews, Wayne, Mich. "Collar and Matthew's $100 Catarrh Cure"	May 29, 1877	11	927
1,288	Collins Company, Collinsville, Conn. "New Patent Screw Wrenches"	Dec. 4, 1877	12	943
1,289	Same..... "Collins & Co., 'Hartford' Cast Cast-Steel Plows"	Dec. 4, 1877	12	943
1,290	Same..... "New Patent Screw Wrenches"	Dec. 4, 1877	12	943
1,050	Collins, Willard C., Bucksport, Me. "Canker Cure Bitters"	May 8, 1877	11	791
1,014	Colton, J. W., Westfield, Mass. "Colton's Toilet Article No. 3; For the Complexion and Skin"	Mar. 27, 1877	11	505
966	Combs, Presley B., Alliance, Ohio. "Presley B. Combs' Horse Powder"	Feb. 6, 1877	11	199
1,058	Connelly, Anna, New York, N. Y. "For the Hair"	May 15, 1877	11	835
1,065	Crane & Brigham, San Francisco, Cal. "Steelo's Pain Eradicator"	May 22, 1877	11	881
972	Crockett, Nathaniel B., Boston, Mass. "Crockett's Washing Fluids"	Feb. 13, 1877	11	252
1,162	Culmer, W. H., Salt Lake City, Utah. "Rocky Mountain Cough Syrup"	Aug. 28, 1877	12	354
1,193	Davis, Charles H., Boston, Mass. "Volney's Wild Cherry Cough Candy"	Oct. 9, 1877	12	36
1,264	Davis, James M., Bergen Point, N. J. "The Best Domestic"	Nov. 27, 1877	12	892
1,103	Dewees, Benjamin F., Philadelphia, Pa. "French All Wool Drap d'Ete Cachemire"	July 3, 1877	12	9
979	De Witt, Thomas, Kavana, N. Y. "De Witt's Carbolated Tar Soap"	Feb. 20, 1877	11	291
1,059	Dick, Dundas, New York, N. Y. "Notice"	May 15, 1877	11	835
1,044	Dohan, Carroll & Co., New York, N. Y. "Empress of India"	May 1, 1877	11	743
1,218	Donaldson Brothers, New York, N. Y. "Novelty Corset Works"	Oct. 30, 1877	12	717
1,188	Donnel Manufacturing Company, Saint Louis, Mo. "Griffiths' Medicinal Blackberry Brandy"	Sept. 25, 1877	12	520
983	Donnell & Mansir, Richmond, Me. "East Indian Pain Cure"	Feb. 20, 1877	11	291
1,051	Dornbusch, Philipp, Nashville, Tenn. "Ph. Dornbusch's Champagne of Herbs"	May 8, 1877	11	791
1,118	Dougherty, Andrew, New York, N. Y. "A. Dougherty Patentee New York"	July 17, 1877	12	97
1,181	Doyle, Patrick H., Brooklyn, N. Y. "Directions for Use"	Sept. 18, 1877	12	479
1,186	Drake & Woodman, West Lebanon, N. H. "Perfect Solvent, for Removing Grease, Paint, Dirt, Stains, &c."	Sept. 18, 1877	12	479
1,197	Draper, William P., Springfield, Mass. "The Handy Packet Indigo Bluing,"	Oct. 16, 1877	12	628
1,139	Durfee, George B., Fall River, Mass. "Fall River Standard"	Aug. 7, 1877	12	230
1,140	Same..... "Our Own"	Aug. 7, 1877	12	230

List of labels registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
1,131	Dyer, Benjamin W., New York, N. Y. "Kidney Tea"	July 31, 1877	12	191
1,172	Same..... "Witch Hazel Liniment"	Sept. 4, 1877	12	397
1,173	Same..... "Iron Condition Powders"	Sept. 4, 1877	12	397
1,277	Same..... "Witch Hazel Salve"	Dec. 4, 1877	12	943
1,278	Same..... "Witch Hazel Cough Balsam"	Dec. 4, 1877	12	943
1,325	Eaton, Byron B., Indianapolis, Ind. "Powder"	Dec. 25, 1877	12	1078
1,246	Eddystone Manufacturing Company, Philadelphia, Pa. "Eddystone"	Nov. 6, 1877	12	757
967	Edwards, Hutchison, Leesburg, Va. "Wild Cherry Pastilles"	Feb. 6, 1877	11	199
1,034	Eggleston, Jesse S., Auburn, N. Y. "Eggleston's Lubricating Oil"	Apr. 17, 1877	11	643
1,141	Eisner, Moritz, Philadelphia, Pa., and Samy Mandel, New York, N. Y. "Boonekamp of Maag-Bitter"	Aug. 7, 1877	12	230
1,104	Emory, Thomas, Syracuse, N. Y. "Extra Fine Four-Ply, 72-Inch Reel Carpet Warp"	July 3, 1877	12	9
1,178	Ensign, Edward C., Waymart, Pa. "Niles Cathartic Pills, &c."	Sept. 11, 1877	12	432
1,006	Fairbrother, Helen F., New Bedford, Mass. "Fairbrother's Venetian Ointment and Emolient Salve"	May 22, 1877	11	881
918	Fechheimer, Goodkind & Co., New York, N. Y. "The Andes Shirt"	Jan. 16, 1877	11	71
1,310	Fenton, Enos, Kalamazoo, Mich. "Dr. E. Fenton's Great Catarrh Annihilator"	Dec. 18, 1877	12	1028
1,105	Ferguson, R. B., Washington, D. C. "Compound Glycerite of Carbolic Acid and Camphor"	July 3, 1877	12	9
1,299	Fischer, Charles C. and Ernest I., Philadelphia, Pa. "Prof. Liebig's Double Bottle Hair Re-Renewer"	Dec. 11, 1877	12	983
1,080	Fisher, W. C. and G. C., Patoka, Ind. "Dr. Church's Vegetable Liver Pills"	June 5, 1877	11	973
1,119	Fitler & Co., Edwin H., Philadelphia, Pa. "Manufactured by the Philadelphia Cordage Works".	July 17, 1877	12	97
1,040	Flagg, C. E., Cleveland, Ohio. "Chemical Spirit Gas"	May 15, 1877	11	835
1,163	Fletcher, Charles M., New York, N. Y. "Coca Bitters"	Aug. 28, 1877	12	354
992	Flohr, Hymers & Co., Saint Louis, Mo. "Flohr, Hymers & Co., Choice Confections"	Mar. 6, 1877	11	377
1,309	Flynt, D. D., Dexter, Me. "Dr. Flynt's Sciatic Remedy"	Dec. 18, 1877	12	1028
1,132	Forbes Lithograph Manufacturing Company, Boston, Mass. "Dry Goods"	July 31, 1877	12	191
1,133	Same..... "Dry Goods. Importers, Jobbers, and Retailers"	July 31, 1877	12	191
1,176	Same..... "Dry Goods"	Sept. 4, 1877	12	397
1,005	Foye, W. B., Canton, Ohio. "Foye's Italian Liniment"	Mar. 20, 1877	11	461
1,085	Frank, Magnus, New York, N. Y. "Malt Mousseux"	June 12, 1877	11	1013
955	Freeman, K. and S. A., Boston, Mass. "Boston Yeast Powder"	Jan. 23, 1877	11	113
1,110	Fuchs, Fritz W., Hoboken, N. J. "No. 4,711 Eau de Cologne"	July 10, 1877	12	55
1,207	Fulton & Son, T. H., New Haven, Conn. "Washing Made Easy"	Oct. 23, 1877	12	670
940	Gaff, Fleischmann & Co., Cincinnati, Ohio. "Compressed Yeast"	Jan. 9, 1877	11	40
949	Same..... "One Package of yeast is sufficient for one baking of three and a half pounds of flour"	Jan. 16, 1877	11	71
993	Same..... "Gaff, Fleischmann & Co.'s Compressed Yeast"	Mar. 6, 1871	11	377
1,189	Gail & Ax, G. W., Baltimore, Md. "Little Joker"	Sept. 25, 1877	12	520
1,161	Gardinier & Varney, New York, N. Y. "The Comic Playing Cards of Fortune"	Aug. 28, 1877	12	354
1,220	Garney & Co., James W., Scranton, Pa. "Dr. Galvin's Celebrated Croup Tincture"	Nov. 6, 1877	12	757
973	Gayetty & Co., Brooklyn, N. Y. "Medicated Paper"	Feb. 13, 1877	11	252
1,021	Genovar, B., Saint Augustine, Fla. "Orange Wine"	Apr. 3, 1877	11	555
1,219	Gerry, Charles F., Sudbury, Mass. "The Ready Cleanser"	Oct. 30, 1877	12	717
1,152	Goldsmith, Henry D., New York, N. Y. "Dispense with the Buttons and use the Adjustable Clasp"	Aug. 14, 1877	12	270
1,251	Gorham, J. R., jr., Newburg, N. Y. "Gray's Celebrated Wine Bitters"	Nov. 13, 1877	12	799
941	Gosling, Henry, San Francisco, Cal. "Sweet Tar Drops"	Jan. 9, 1877	11	40
968	Same..... Mrs. Mary J. Bingham's "Sweet Tar Balsam"	Feb. 6, 1877	11	199
1,230	Goodman, Charles F., Omaha, Nebr. "S. H. Kennedy's Pinus Canadensis Ointment"	Nov. 6, 1877	12	757
1,221	Goodyear Rubber Company, New York, N. Y. "Goodyear Practical Syringe"	Oct. 30, 1877	12	717
1,222	Same..... "Goodyear Superior Syringe, No. 1"	Oct. 30, 1877	12	718
1,223	Same..... "The Goodyear Improved No. 1 Household Enema Syringe"	Oct. 30, 1877	12	718
1,070	Greenwood, Mary S., Grantville, and Susan K. Compton, Boston, Mass. "Derby Table Sauce"	May 22, 1877	11	881
1,052	Griffin, Caleb H., Lynn, Mass. "The Dressmaker's Square"	May 8, 1877	11	791
1,111	Gross Brothers, Milwaukee, Wis. "A Sanitary Measure to Prevent Disease"	July 10, 1877	12	55
994	Groves, John N. C., Saint Louis, Mo. "Dr. Wm. Heath's Dropsy Cure"	Mar. 6, 1877	11	377
1,039	Haas, Nathan, Dayton, Ohio. "The Electro Magnetic Anodyne"	Apr. 24, 1877	11	691
1,227	Hall & Ruckel, New York, N. Y. "Spalding's Celebrated Prepared Glue"	Oct. 30, 1877	12	718
1,241	Same..... "Van Buskirk's Fragrant Sozodont"	Nov. 6, 1877	12	757
1,094	Hamer, H. H., Careyville, Tenn. "H. H. Hamer's Soap"	June 26, 1877	11	1115
1,142	Hanford & Co., A., New York, N. Y. "Hanford's Purified Rye"	Aug. 7, 1877	12	230
1,143	Same..... "Hanford's Purified Bourbon"	Aug. 7, 1877	12	230
1,312	Harris, William D., New York, N. Y. "Craig's Kidney Cure"	Dec. 18, 1877	12	1028
1,156	Hart, John, and Abraham A. Myers, Lancaster, Pa. "Nenfeld's Italian Balm"	Aug. 21, 1877	12	315
1,053	Haskins, Ira J., Belvidere, Ill. Dr. Ira J. Haskins' What Is It? "Cures Neuralgia, Catarrh in the Head, &c."	May 8, 1877	11	791
1,061	Hayes, Charles W., and Amanda E. Holcomb, Hartford, Conn. "Hayes and Holcomb's Condensed Washing Blue"	May 15, 1877	11	835
976	Heath & Milligan, Chicago, Ill. "Superior Pure White Lead"	Feb. 20, 1877	11	291
977	Same..... "Superior Coach Color"	Feb. 20, 1877	11	291
978	Same..... "Genuine Burnt Umber"	Feb. 20, 1877	11	291
1,108	Same..... "Heath & Milligan Perfect Green"	July 3, 1877	12	9
1,120	Same..... "Best Light Oak"	July 17, 1877	12	97
1,081	Heaton, Edward, New Haven, Conn. "Imperial Granum"	June 5, 1877	11	973
1,082	Same..... same	June 5, 1871	11	973
1,311	Hegeman & Co., New York, N. Y. "Hegeman & Co.'s Celebrated Elixir of Calisaya Bark"	Dec. 18, 1877	12	1028
1,086	Heppenheimer & Maurer, New York, N. Y. "Scene on a Race Course"	June 12, 1877	11	1013
1,258	Same..... "El Comerico"	Nov. 20, 1877	12	844
1,259	Same..... "Water Lily"	Nov. 20, 1877	12	844
1,265	Same..... "Amulet"	Nov. 27, 1877	12	892
1,266	Same..... "Four in Hand"	Nov. 27, 1877	12	892
1,267	Same..... "America"	Nov. 27, 1877	12	892
1,268	Same..... "Four in Hand"	Nov. 27, 1877	12	892
1,174	Herbs, F. and M., Hudson, N. Y. "Herbs 3 for 10"	Sept. 4, 1877	12	397
995	Hill, John Q., Worcester, Mass. "Liquid Amaudine"	Mar. 6, 1877	11	377
1,291	Hinman, L. B., New Haven, Conn. "L. B. Hinman's Asthmatic Respirators and Catarrh Cure"	Dec. 11, 1877	12	982
1,220	Holleman & Co., Morganton, N. C. "Neurotic, the Great External Remedy for Neuralgia"	Oct. 30, 1877	12	717
1,089	Holman Liver Pad Company, New York, N. Y. "Holman's Ague and Liver Pad"	June 19, 1877	11	1063
1,090	Same..... "Holman's Fever, Ague, and Liver Pad"	June 19, 1877	11	1063
1,134	Hopper, H. C., Philadelphia, Pa. "Pennsylvania Baking Powder"	July 31, 1877	12	191
1,046	Hotchkiss, Hiram G., Lyons, N. Y. "International Prize Medal Oil of Peppermint"	Mar. 20, 1877	11	461
1,300	Howes, Franklin, Northampton, Mass. "Franklin Howes' Medical Discoveries"	Dec. 11, 1877	12	983

List of labels registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
1,279	Hubbard, William H., Rochester, N. Y. "Hubbard's Prize Gift Cigar"	Dec. 4, 1877	12	943
1,165	Huber, Benjamin F., Lancaster, Pa. "Return Pop Corn Ball"	Aug. 28, 1877	12	354
956	Humphreville, Charles, and Alexander C. Killheffer, Lancaster, Pa. "The Brightest and Best Steve Polish"	Jan. 23, 1877	11	113
1,083	Ingram, John, Saint Louis, Mo. "Ingram's Great Radical Rheumatic Remedy"	June 5, 1877	11	973
1,297	International Starch Company, Buffalo, N. Y. "The International Starch Co.'s Corn Starch"	Dec. 11, 1877	12	982
1,298	Same....."The International Starch Co.'s Laundry Starch"	Dec. 11, 1877	12	983
953	Isaacs & Levy, Philadelphia, Pa. "Commercial Collar Co."	Jan. 16, 1877	11	71
950	Jacques, George, Boston, Mass. "Eau-de-Cologne of George Jacques"	Jan. 16, 1877	11	71
962	Same.....same	Jan. 30, 1877	11	155
1,054	Johnson, George L., Boston, Mass. "United States Steam-Feed Co."	May 8, 1877	11	791
1,166	Judge, J. D., Boston, Mass. "Dr. Judge's Oxy-Hydrogenated Air"	Aug. 28, 1877	12	354
1,314	Keith & Co., B., New York, N. Y. "Keith's Cough Compound"	Dec. 18, 1877	12	1028
1,315	Same....."Keith's Dyspepsia Elixir"	Dec. 18, 1877	12	1028
1,146	Kellogg, Edward H., New York, N. Y. "Non-Corrosive Cylinder Oil"	Aug. 7, 1877	12	231
1,313	Kennedy & Co., Pittsburg, Pa. "Natural Hair Restorer, Carboline"	Dec. 18, 1877	12	1028
1,112	Kennedy, Simon H., Omaha, Nebr. "S. H. Kennedy's Concentrated Extract of Pinus Canadensis".	July 10, 1877	12	55
1,062	King, George W., Wilmington, Del. "King's Good Samaritan Cough Sirup"	May 15, 1877	11	835
1,022	King, James, jr., New York, N. Y. "Sapo. A Saponaceous Tooth Elixir"	Apr. 3, 1877	11	555
1,274	Kingsbury, George E., Boston, Mass. "Dr. Dixford's Instant Pain Relief"	Nov. 27, 1877	12	892
1,208	Kingsford, Thomson, Oswego, N. Y. "Kingsford's Oswego Pure Starch"	Oct. 23, 1877	12	670
1,209	Same....."Kingsford's Oswego Satin Gloss Starch"	Oct. 23, 1877	12	670
1,316	Koons, Jonathan, Northern, Ill. "Dr. Koons' Sanguifying Usquevaugh"	Dec. 18, 1877	12	1028
1,028	Kopitzsch & Son., Charles F., Pottsville, Pa. "Economical Soap"	Apr. 10, 1877	11	601
1,252	Kurr, Henry H., Boston, Mass. "Kurr's Liquid Hoof Ointment"	Nov. 13, 1877	12	799
996	Lane, John A., and Albert A. Greene, Boston, Mass. "Ducelle's French Yeast Powder"	Mar. 6, 1877	11	377
1,106	Larabee & Co., E. J., Albany, N. Y. "Larabee's Celebrated Wheat Meal Biscuit"	July 3, 1877	12	9
1,067	Lautenbach, Robert, Baltimore, Md. "Campl orated Tar Paper"	May 22, 1877	11	881
1,167	Lautz Brothers & Co., Buffalo, N. Y. "Lautz Bros. & Co.'s Stearine Soap"	Aug. 28, 1877	12	354
1,269	Lawson Chemical Company, Cleveland, Ohio. "Lawson's Curative"	Nov. 27, 1877	12	892
1,317	Lenzi, Martin, Salt Lake City, Utah. "Lenzi's Helvetian Salve"	Dec. 18, 1877	12	1028
1,210	Libby, McNeill & Libby, Chicago, Ill. "Cooked Beef Tongue"	Oct. 23, 1877	12	670
1,211	Same....."Cooked Corned Beef"	Oct. 23, 1877	12	670
951	Lilley, Professor, New York, N. Y. "Professor Lilley's Embrocation for Rheumatism or Lumbago, &c."	Jan. 16, 1877	11	71
1,107	Little & Shaw, New York, N. Y. "Prof. Shaw's Chirepedin or Perfumed Foot-Powder"	July 3, 1877	12	9
1,099	Lodi Chemical Works, Lodi, N. J. "Potato Pest Poison"	June 26, 1877	11	1115
1,270	Lyon & Co., Z. I., Durham, N. C. "Genuine Pride of Durham Smoking Tobacco"	Nov. 27, 1877	12	892
1,015	Mahn, L. H., Jamaica Plain, Mass. "Double Cover"	Mar. 27, 1877	11	505
1,016	Marsh & Co., New York, N. Y. "Notice"	Mar. 27, 1877	11	505
1,017	Same....."Directions"	Mar. 27, 1877	11	505
1,018	Same....."Keep the Bottle well Corked and Shake Before Using"	Mar. 27, 1877	11	505
1,019	Same....."Directions"	Mar. 27, 1877	11	505
1,020	Same....."The Directons Must Be Followed"	Mar. 27, 1877	11	505
1,074	Marshall, Lamar & Co., Aurora, Ind. "Dr. Limericks's Hog Cholera Cure and Preventive"	May 29, 1877	11	927
1,326	Marshall, Mary W., Fond du Lac, Wis. "Marshall's California Sugar Pine Balsam"	Dec. 25, 1877	12	1078
1,113	Marvin & Co., S. S., Pittsburg, Pa. "Something New"	July 10, 1877	12	55
1,114	Same....."Self-Raising Pan-Cake Flour"	July 10, 1877	12	55
1,124	Mathis, Charles B., Tom's River, N. J. "Mathis' Dysentery Remedy"	July 24, 1877	12	140
1,280	Matthews, John, New York, N. Y. "True Mineral Waters"	Dec. 4, 1877	12	943
1,281	Same....."Soda Water from Matthews Apparatus"	Dec. 4, 1877	12	943
1,282	Same....."Persian Mead"	Dec. 4, 1877	12	943
1,283	Same....."Soda Water"	Dec. 4, 1877	12	943
1,284	Same....."Ginger Ale from Matthews Apparatus"	Dec. 4, 1877	12	943
1,318	Same....."Otaki Root Beer from Matthews Apparatus"	Dec. 18, 1877	12	1028
1,319	Same....."Otaki Root Beer"	Dec. 18, 1877	12	1028
1,029	McFadden, Thomas, jr., Pittsburg, Pa. "Murphy Pledge Charm"	Apr. 10, 1877	11	601
1,231	McGill, George W., New York, N. Y. "McGill's Patent Binders"	Nov. 6, 1877	12	757
1,232	Same....."McGill's Paper Fasteners, Assorted Sizes"	Nov. 6, 1877	12	757
1,233	Same....."McGill's Patent Button Head Fasteners"	Nov. 6, 1877	12	757
1,234	Same....."Miscellaneous"	Nov. 6, 1877	12	757
1,235	Same....."McGill's Patent T. Binders"	Nov. 6, 1877	12	757
1,236	Same....."Double Shanks"	Nov. 6, 1877	12	757
1,237	Same....."McGill's Patent Split Shank Fasteners"	Nov. 6, 1877	12	757
1,238	Same....."McGill's Patent T. Fasteners"	Nov. 6, 1877	12	757
1,248	Same....."McGill's Flat Head Paper Fastener"	Nov. 6, 1877	12	757
1,249	Same....."McGill's Round Head Paper Fastener"	Nov. 6, 1877	12	757
1,301	Same....."Flat Tops"	Dec. 11, 1877	12	983
1,302	Same....."Round Tops"	Dec. 11, 1877	12	983
1,303	Same....."Round Caps"	Dec. 11, 1877	12	983
1,321	McKelvay, George I., Philadelphia, Pa. "Tartarin Koomis Made from Pure Milk Undiluted by Whey"	Dec. 18, 1877	12	1028
1,320	Meade & Baker, Richmond, Va. "Carbolic Mouth Wash"	Dec. 18, 1877	12	1028
1,191	Meagher, John, Minneapolis, Minn. "John Meagher's Celebrated Eye Water"	Oct. 2, 1877	12	6
1,239	Same....."Dr. John Meagher's Wonderful Cure for Scrofula or King's Evil"	Nov. 6, 1877	12	757
1,240	Same....."Dr. John Meagher's All-Healing Salve"	Nov. 6, 1877	12	757
1,198	Mears, James B., Brooklyn, N. Y. "The Universal Detergent Toilet Soap"	Oct. 16, 1877	12	628
1,045	Menown, H. & J., Kansas City, Mo. "Economy Baking Powder, Manufactured by H. & J. Menown"	May 1, 1877	11	743
1,275	Merchants Tobacco Company, Boston, Mass. "Merchants Tobacco Company"	Nov. 27, 1877	12	892
1,276	Same.....same	Nov. 27, 1877	12	892
1,292	Same....."This Box Contains an Order", &c	Dec. 11, 1877	12	982
1,293	Same....."One of the Caddies in This Case Contains an Order, &c."	Dec. 11, 1877	12	982
1,294	Merrick, Otis & Co., Boston, Mass. "Pyro-Quina," &c	Dec. 11, 1877	12	982
1,007	Messinger, Charles R., Toledo, Ohio. "Toledo Banner"	Mar. 20, 1877	11	461
1,182	Miami Distilling Company, Hamilton and Cincinnati, Ohio. "Pure Copper Distilled Soft Mash Whisky"	Sept. 18, 1877	12	479
1,008	Miller, Francis L., Newark, N. J. "Miller's Ointment for the Prevention and Positive Cure of Gathered Breasts"	Mar. 20, 1877	11	461
1,009	Miller, Francis L., Newark, N. J. "Miller's Sure Cure for Piles"	Mar. 20, 1877	11	461
1,075	Millner, James R., Cascade, Va. "Jas. R. Millner's Extra Golden Twist"	May 29, 1877	11	927
957	Milwaukee Cement Company, Milwaukee, Wis. "Milwaukee Cement"	Jan. 23, 1877	11	113
969	Momenthy, B., Baltimore, Md. "Nursery Beer"	Feb. 6, 1877	11	199
1,135	Moody, John C., San Francisco, Cal. "Moody's Concentrated Fluid Extract of Sarsaparilla, Stillingia, and Yellow Dock"	July 31, 1877	12	191
1,199	Moore, Azariah, Muncie, Ind. "Print for Signs"	Oct. 16, 1877	12	628

List of labels registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
1,071	Moore, Henry, Orange, N. J. "Mead's Infallible Pile Cure"	May 22, 1877	11	881
1,185	Moss, George A., Orange, N. J. "The Union Dressing, &c"	Sept. 18, 1877	12	479
1,327	Mundell & Co., John, Philadelphia, Pa. "The Best Sole Leather Tip Made"	Dec. 25, 1877	12	1078
1,168	Murison, James, Saint Louis, Mo. "Murison's Catarrh and Bronchial Fumigator"	Aug. 28, 1877	12	355
1,260	Same. "Murison's Catarrh and Bronchial Cigarettes, &c"	Nov. 20, 1877	12	844
1,253	Nellis, Aaron J., Pittsburg, Pa. "Cast Tool Steel Casting"	Nov. 13, 1877	12	799
974	New York Belting and Packing Company, New York, N. Y. "Vulcanized Rubber Belting"	Feb. 13, 1877	11	252
975	Same. same	Feb. 13, 1877	11	252
980	Nichols, George M., Brooklyn, N. Y. "New York Nipple Shield"	Feb. 20, 1877	11	291
1,200	Oechs, Anthony, New York, N. Y. "Brandenburg Freres, Bordeaux"	Oct. 16, 1877	12	628
1,144	Pabst, Theodore, and Henry Esch, New York, N. Y. "Baccarat"	Aug. 7, 1877	12	230
1,285	Pace, James B., Richmond, Va. "Liberty Brand"	Dec. 4, 1877	12	943
1,095	Paine, John S., Providence, R. I. "Self Kindlings"	June 26, 1877	11	1115
1,121	Painter & Calvert, San Francisco, Cal. "The Stock Liniment"	July 17, 1877	12	97
1,030	Same. "The Stock Condition Powder"	Apr. 10, 1877	11	601
1,147	Same. same	Aug. 7, 1877	12	231
1,271	Paper Fabrique Company, Cincinnati, Ohio. "Pedro"	Nov. 27, 1877	12	892
1,328	Same. "Playing Card Back"	Dec. 25, 1877	12	1078
1,010	Parce, Judson E., Otselic, N. Y. "Parce's Diphtheria Cure"	Mar. 20, 1877	11	461
942	Park, John D., Covington, Ky. "By Appointment"	Jan. 9, 1877	11	40
943	Same. "John D. Park is the sole manufacturer of this delightful and palatable gin, etc"	Jan. 9, 1877	11	40
944	Same. "Improved Extract of Yellow Dock and Sarsaparilla"	Jan. 9, 1877	11	40
945	Same. "Balsam of Wild Cherry"	Jan. 9, 1877	11	40
985	Same. "English Crown Gin"	Feb. 20, 1877	11	291
986	Same. "Special Notice to Dealers and Consumers"	Feb. 20, 1877	11	291
987	Same. "English Crown Gin"	Feb. 20, 1877	11	291
988	Same. same	Feb. 20, 1877	11	291
1,194	Same. "London Swan Gin"	Oct. 9, 1877	12	36
1,195	Same. same	Oct. 9, 1877	12	36
1,196	Same. "Special Notice"	Oct. 9, 1877	12	36
984	Parker & Co., N. H., Boston, Mass. "Raven Paste Stove Polish"	Feb. 20, 1877	11	291
963	Peck, Henry T., Philadelphia, Pa. "Peck's Cod Liver Oil and Wild Cherry Bark"	Jan. 30, 1877	11	155
961	Pettingell, Albert C., Salem, Mass. "Brined"	Jan. 23, 1877	11	111
1,023	Pfenninger, John, Alton, Ill. "Swiss Health Tea"	Apr. 3, 1877	11	555
1,125	Pierce, R. V., Buffalo, N. Y. "Dr. Pierce's Favorite Prescription"	July 24, 1877	12	140
1,126	Same. "Dr. Pierce's Compound Extract of Smart Weed"	July 24, 1877	12	140
952	Pilley, Benjamin F., Philadelphia, Pa. "Hop Syrup"	Jan. 16, 1877	11	71
1,155	Pinckney, Jackson & Co., New York, N. Y. "Huile D'Olives"	Aug. 14, 1877	12	271
1,040	Poland, Benjamin, Arlington, Mass. "The Patent Machine-made Metallic Brush"	Apr. 24, 1877	11	691
997	Price, C. H. and J., Salem, Mass. "Diphtheritie Troches"	Mar. 6, 1877	11	377
1,136	Quirdan, Jeremiah, New York, N. Y. "Madame Lang's Perfect Nurser"	July 31, 1877	12	191
1,201	Randolph, C. F., Altoona, Pa. "Jamaica Pills"	Oct. 16, 1877	12	628
1,202	Same. "Jamaica Syrup"	Oct. 16, 1877	12	628
1,031	Reay, John W., Brooklyn, N. Y. "Instantaneous Disinfectant and Deodorizer"	Apr. 10, 1877	11	601
958	Renfrew Manufacturing Company, South Adams, Mass. "Dress Styles"	Jan. 23, 1877	11	113
1,096	Rheims, Leon, New York, N. Y. "Special Hand Sewing Cotton"	June 26, 1877	11	1115
1,097	Same. "Nas Schlumberger & Cie, Gueb-Willer"	June 26, 1877	11	1115
1,157	Richardson, Joseph C., Saint Louis, Mo. "Clifford's Febrifuge"	Aug. 21, 1877	12	315
1,158	Same. "Clifford's Febrifuge or Fever and Ague Cure"	Aug. 21, 1877	12	315
1,159	Same. "Directions for Using Clifford's Febrifuge"	Aug 21, 1877	12	315
1,304	Ricksecker, Theodore, New York, N. Y. "Ricksecker's Nurser"	Dec. 11, 1877	12	984
1,261	Ringwalt, Adam Z., Lancaster, Pa. "A. Z. Ringwalt's Celebrated Hair Liquid"	Nov. 20, 1877	12	844
1,148	Rogers, James J., Binghamton, N. Y. "J. J. Rogers' Celebrated Birch Beer"	Aug. 7, 1877	12	231
1,272	Rogers, Pembroke C., Cortlandville, N. Y. "Dr. D. D. Judson's Genuine Healing Balsam"	Nov. 27, 1877	12	892
1,055	Ross, S., Louisville, Ky. "French Imperishable Oil Photo"	May 8, 1877	11	791
1,203	Rowe & Co., New York, N. Y. "Flat Iron Polisher"	Oct. 16, 1877	12	628
1,046	Rueter & Alley, Boston, Mass. "Highland Spring India Pale Ale"	May 1, 1877	11	743
937	Rumford Chemical Works, Providence, R. I. "Horsford's Self Raising Bread Preparation"	Jan. 2, 1877	11	6
938	Same. "Rumford Yeast Powder"	Jan. 2, 1877	11	6
970	Same. "Wilson's Rumford Yeast Powder"	Feb. 6, 1877	11	199
1,037	Same. "Horsford's Acid Phosphate"	Apr. 17, 1877	11	643
1,224	Same. same	Oct. 30, 1877	12	718
1,295	Russian Remedy Company, Philadelphia, Pa. "Barbour's Russian Remedy"	Dec. 11, 1877	12	982
1,032	Sander, Christian, Jolly P. O., Ohio. "Self Recommending Eye Salve for Diseased Eyes"	Apr. 10, 1877	11	601
1,137	Sanderson, Buchanan & Co., Chicago, Ill. "Sanderson's Soap Crystals"	July 31, 1877	12	199
1,153	Sanford, Samuel T. W., Long Island City, N. Y. "Dr. Sanford's Liver Invigorator or Liver Remedy"	Aug. 14, 1877	12	270
1,076	Schermerhorn, George W., Philadelphia, Pa. "Schermerhorn's Tonic Extract of Wine"	May 29, 1877	11	927
1,011	Schloss, Joseph, New York, N. Y. "Complimentary"	Mar. 20, 1877	11	461
1,063	Schrueder, Herman, Quincy, Ill. "Sweet Cathartin"	May 15, 1877	11	835
1,115	Sears & Co., William. "William Sears & Co., Cracker Bakers"	July 10, 1877	12	55
999	Sherman, Lewis, Milwaukee, Wis. "Lewis Sherman, Milwaukee"	Mar. 13, 1877	11	422
1,212	Siegel, Lewis, New York, N. Y. "Catawba Grape Champagne"	Oct. 23, 1877	12	670
1,247	Simpson, Greenlief W., Boston, Mass. "Simpson's Topocan Brand Dimond Creamery Butter"	Nov. 6, 1877	12	757
1,296	Smith & Co., F. E., Middlebury, Vt. "Universal Pile Pills"	Dec. 11, 1877	12	982
1,064	Smith, E. H., New York, N. Y. "Self Indexing Scrap Book"	May 15, 1877	11	835
1,116	Soles, James D., Mount Pleasant, Iowa. "J. D. Soles' Invisible Ink"	July 10, 1877	12	55
1,149	Specific Medicine Company, Saint Louis, Mo. "Elixir of Honey"	Aug. 7, 1877	12	231
1,150	Same. "Dr. Adam Bell's Fit-Cure"	Aug. 7, 1877	12	231
1,151	Spyer, J., and E. C. Chase, Saint Louis, Mo. "St. Louis Dental Co."	Aug. 14, 1877	12	270
1,242	Steketee, George G., Grand Rapids, Mich. "Kimm's Holland Worm Cakes"	Nov. 6, 1877	12	757
1,243	Same. "Kimm's Ague Cure"	Nov. 6, 1877	12	757
1,244	Same. "Kimm's $100 Premium Aromatic Bitters"	Nov. 6, 1877	12	757
1,245	Same. "Kimm's 50c Premium Aromatic Bitters"	Nov. 6, 1877	12	757
1,286	Stevens, Frederick S., Bridgeport, Conn. "Mistura Copaiba Comp"	Dec. 4, 1877	12	943
1,287	Same. "Alterative Syrup"	Dec. 4, 1877	12	943
1,305	Stillwell, Rinaldo H., Stockton, N. J. "Chinese Paper Ware"	Dec. 11, 1877	12	983
1,179	Stoughton, D. G., Hartford, Conn. "Stock Powder"	Sept. 11, 1877	12	432
1,154	Strahlem, Isaac, Cleveland, Ohio. "The Non-Explosive Chemical Gas for Illuminating Purposes"	Aug. 14, 1877	12	271
1,204	Strobel, Robert S., Baltimore, Md. "Bock y Ca. Trade-Mark"	Oct. 16, 1877	12	628
1,213	Same. "Bock y Co"	Oct. 23, 1877	12	670
1,214	Same. "Bock y Co. Habana"	Oct. 23, 1877	12	670
1,215	Same. "Regalia De Preferencia"	Oct. 23, 1877	12	670
1,183	Stuart, Peterson & Co., Philadelphia, Pa. "Stuart, Peterson & Co.'s Enameled Ware"	Sept. 18, 1877	12	479
1,184	Same. "Stuart, Peterson & Co.'s Tinned and Enameled Ware"	Sept. 18, 1877	12	479

List of labels registered during the year 1877—Continued.

No.	Name, residence, and title.	Date.	Official Gazette. Vol.	Page.
1,254	Sykes, Charles R., Chicago, Ill. "Dr. Sykes Sure Cure for Catarrh"	Nov. 13, 1877	12	799
1,098	Tenner, Armin, Cincinnati, Ohio. "Reec's Patent Compound Fire Extinguisher"	June 26, 1877	11	1115
1,084	Tharpe, M. H., Coffeeville, Miss. "Yalobusha Tonic"	June 5, 1877	11	973
1,273	Thayer & Co., Henry, Cambridge, Mass. "Blatticide, a Destroyer of Cockroaches and Water Bugs"	Nov. 27, 1877	12	892
989	Thedford & Co., M. A., Chattanooga, Tenn. "Dr. A. Q. Simmon's Liver Medicine"	Feb. 27, 1877	11	333
1,169	Thompson, Richard J., and Edward T. Bedford, New York, N. Y. "Lubricating B. & T. Oil"	June 12, 1877	12	355
1,087	Thomson, Phebe L. D., Chicago, Ill. "Lewis' Hemorrhage Cure"	Aug. 28, 1877	11	1013
1,024	Thornton & Co., John, Philadelphia, Pa., and New York, N. Y. "These Buttons Obtained the Only Prize Awarded to Pearl Buttons, &c."	Apr. 3, 1877	11	555
1,000	Thurston & Co., Garden City, Minn. "Thurston's Great Scrofula Cure and Blood Purifier"	Mar. 13, 1877	11	422
1,077	Tingue, House & Co., New York, N. Y. "Hawthorn Chesterfield's"	May 29, 1877	11	927
1,072	Toy & Co., Thomas D., Norfolk, Va. "Wright's Cod Liver Oil and Cream of Tar"	May 22, 1877	11	881
1,255	Trott, C. H., Boston, Mass. "Trott's Horse Liniment," &c	Nov. 13, 1877	12	799
1,206	Vinton, Oliver M., New York, N. Y. "Vinton's California Golden Honey Syrup"	Oct. 16, 1877	12	628
1,225	Vreeland, Benjamin, Passaic, N. J. "Vreeland's Medicated Wine of Wild Cherries"	Oct. 30, 1877	12	718
1,226	Same...."Vreeland's Tonic Wine of Wild Cherries"	Oct. 30, 1877	12	718
1,216	Washington Manufacturing Company, Troy, N. Y. "Statuette"	Oct. 23, 1877	12	670
1,323	Weatherill, Henry G., Elgin, Ill. "Elgin Polish"	Dec. 18, 1877	12	1028
1,306	Webb & Co., J. G., Saint Louis, Mo. "Dr. A. Q. Simmon's Genuine Vegetable Liver Medicine"	Dec. 11, 1877	12	983
1,091	Weber, J. Wesley, New York, N. Y. "Sacred to the Memory of"	June 19, 1877	11	1063
1,262	Wells & Elliott, New York, N. Y. "Elliott's Carbolic Snuff"	Nov. 20, 1877	12	844
1,025	Wells, Schuyler C., Le Roy, N. Y. "Dr. Shiloh's System Vitalizer"	Apr. 3, 1877	11	555
1,138	Wendel, Edward H. "Extract Florida Bouquet"	July 31, 1877	12	191
1,322	Wheeler, Oscar C., New York, N. Y. "Oakdale Mills"	Dec. 18, 1877	12	1028
1,035	Whitall, Tatum & Co., New York, N. Y. "Phenix Nursing Bottle"	Apr. 17, 1877	11	643
959	White, John S., Portland, Me. "Model Varnish Brushes"	Jan. 23, 1877	11	114
960	Same...."Wedge Paint Brushes"	Jan. 23, 1877	11	114
1,026	White, Samuel S., Philadelphia, Pa. "Half-Ounce Prepared Gutta-Percha Pellets"	Apr. 3, 1877	11	555
1,088	White, Thomas, Bangor, Me. "Tea, Price 50 cts. per pound"	June 12, 1877	11	1013
990	Whitman & Son, Stephen F., Philadelphia, Pa. "Whitman's Instantaneous Chocolate"	Feb. 27, 1877	11	333
1,100	Wiekel & Smith Spice Company, Philadelphia, Pa. "Vienna Coffee"	June 26, 1877	11	1115
971	Wilbor, Alexander B., Boston, Mass. "Wilbor's Pure Cod Liver Oil and Phos. Lime"	Feb. 6, 1877	11	199
1,047	Wood, Council, Dadeville, Ala. "A Card for Business Men, by Council Wood"	May 1, 1877	11	743
1,101	Woodworth & Son, C. B., Rochester, N. Y. "Elixir Theobroma Comp"	June 26, 1877	11	1115
1,056	Wright, Edward A., F. Nielsen, and W. Hodges, Pent Water, Mich. "Wright's Sure Cure for Rheumatism"	May 8, 1877	11	791
1,078	Wright, George S., Racine, Wis. "Wright's Improved American Anti-Pest"	May 29, 1877	11	927
1,101	Wyeth & Brother, John, Philadelphia, Pa. "Compressed Tablet of Chlorate of Potash"	Mar. 13, 1877	11	422
1,002	Same...."Compressed Tablets of Chlorate of Potash"	Mar. 13, 1877	11	422
1,003	Same...."Compressed Tablet of Chlorate of Potash"	Mar. 13, 1877	11	422
1,012	Same...."Compressed Tablets of Pure Chlorate of Potash without Gum or Sugar"	Mar. 20, 1877	11	461
1,068	Same...."Wyeth's Dialysed Iron"	May 22, 1877	11	881
1,069	Same...."Physician's Sample Wyeth's Dialysed Iron"	May 22, 1877	11	881
939	Wyman, George S., Boston, Mass. "Dr. Hunter's Instant Pain Exterminator"	Jan. 2, 1877	11	6
1,127	Young, Ladd & Coffin, New York, N. Y. "Lundborg's Triple Extract of Jockey Club"	July 24, 1877	12	140
1,175	Young, Rolland & Co., New York, N. Y. "Letter and Copying Book"	Sept. 4, 1877	12	397
1,256	Yarnall's Sons, Amos H., Philadelphia, Pa. "Yarnall's Exterminator, for Destroying Rats, Mice, Roaches," &c	Nov. 13, 1877	12	799
1,257	Same...."Yarnall's Unequalled Cattle-Powder"	Nov. 13, 1877	12	799

ALPHABETICAL LIST OF INVENTIONS.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
				Spec.	Dr'g.	Vol.	Page.
A.							
Abdominal supporter	R. W. Gray and T. S. Foster	198,198	Dec. 18, 1877	516	159	12	1036
Abrasive composition	S. Simmons	196,488	Oct. 23, 1877	843		12	703
Accordion	F. Zogbaum	192,478	June 26, 1877	1005	303	11	1138
Acid, Apparatus for manufacturing hydrated sulphurous.	W. D. Jones	188,801	Mar. 27, 1877	861	262	11	520
Acid, Apparatus for manufacturing sulphurous	A. F. C. Reynoso	185,964	Jan. 2, 1877	152	46, 47	11	28
Acid, Apparatus for purifying and condensing sulphuric.	R. W. Wallace	196,957	Nov. 6, 1877	226	67	12	791
Acid by dialysis, Purifying salicylic	E. Schering	196,254	Oct. 16, 1877	599	173	12	660
Adding-machine	M. M. Cram	193,853	Aug. 7, 1877	52	17	12	241
Adding-machine	W. L. Hofer	195,281	Sept. 18, 1877	558	162	12	494
Adding-machine	M. M. Smith	193,425	July 24, 1877	911	277	12	160
Addressing-machine	E. Delano	196,340	Oct. 23, 1877	698	201	12	683
Addressing-machine	A. Dick	195,209	Sept. 18, 1877	482	143	12	484
Addressing-machine	A. H. Longley, jr	191,449	May 29, 1877	1366	412	11	958
Addressing-machine	J. H. Williston	187,335	Feb. 13, 1877	420	132	11	271
Adhesive composition	A. C. Fox	191,420	May 29, 1877	1331	404	11	954
Adhesive substance	O. Long and P. H. Drake	192,773	July 3, 1877	214		12	41
Adjustable bracket	G. P. Davis	187,361	Feb. 13, 1877	445	140	11	274
Adjustable engine and screw-propeller combined	E. N. Gray and G. E. Noyes	190,312	May 1, 1877	197	58	11	771
Adjustable engine and screw-propeller combined	G. E. Noyes	190,355	May 1, 1877	236	70	11	777
Adjustable table	G. H. Dyett	196,203	Oct. 16, 1877	543	157	12	653
Adjusting-clamp	J. S. Atkinson	192,048	June 19, 1877	556	169	11	1067
Advertising	B. S. Howard	187,139	Feb. 6, 1877	211	69	11	232
Advertising-brick	G. McMullen	198,651	Dec. 25, 1877	976	297	12	1111
Advertising-card	H. Mahler	186,209	Jan. 16, 1877	400	122	11	77
Advertising-case, Revolving	E. D. Richmond	188,954	Mar. 37, 1877	1013	311	11	541
Advertising-desk	F. Vornbrock	186,699	Jan. 30, 1877	901	279	11	164
Advertising device	W. A. Brice	187,252	Feb. 13, 1877	335	107	11	260
Advertising device, Automatic smoking	A. H. Dean	196,639	Oct. 30, 1877	1007	293	12	738
Advertising-frame	W. H. Naulty	188,814	Mar. 27, 1877	879	267	11	522
Advertising seat and chair	J. M. A. Lacomme, L. J. C. Marville, and A. A. Giren.	192,770	July 3, 1877	211	62	12	41
Aerated-water fountain	J. C. Johnson	191,346	May 29, 1877	1268	382	11	946
Aerial currents, Apparatus for combining	P. Miban	194,782	Sept. 4, 1877	30	9	12	404
Aerial-machine	J. B. Ward	195,866	Oct. 2, 1877	170	48	12	585
Aerial navigator	M. M. Murrell	194,104	Aug. 14, 1877	338	101	12	286
Aging liquors, Apparatus for	W. M. Storm	196,373	Oct. 23, 1877	729	210	12	688
Aging whisky, &c., Apparatus for	H. C. Johnson	196,094	Oct. 16, 1877	430	125, 126	12	637
Agitating and mixing apparatus	G. L. Witsil	189,293	Apr. 3, 1877	267	87	11	593
Agricultural boiler	J. Carson	196,112	Oct. 16, 1877	454	132	12	641
Agricultural boiler	T. S. Dobbs	190,424	May 8, 1877	326	96	11	797
Agricultural boiler	H. Henley	194,993	July 10, 1877	449	136	12	82
Agricultural boiler	W. McAfee and Y. P. True	189,051	Apr. 3, 1877	37	13	11	564
Agricultural fork	W. Duesler, jr	197,209	Nov. 20, 1877	515	152	12	850
Air and vacuum brake	W. J. Stevens	191,261	May 29, 1877	1196	359	11	936
Air-brake, Railway	H. W. Green, G. W. Hoag, and T. P. Cleaveland.	198,015	Dec. 11, 1877	314	97	12	1000
Air-compressing apparatus	J. B. Root	196,253	Oct. 16, 1877	597	173	12	660
Air-compressor	B. T. Babbitt	198,067	Dec. 11, 1877	360	112	12	1008
Air-compressor	J. Clayton	186,306	Jan. 16, 1877	484	149	11	88
Air-compressor	W. F. Garrison	186,336	Jan. 16, 1877	530	161	11	93
Air-compressor	G. H. Reynolds	187,906	Feb. 27, 1877	1008	311	11	364
Air-cooling apparatus	E. Fixary	191,232	May 29, 1877	1170	350, 351	11	932
Air-cooling apparatus	J. C. Mack	188,923	Mar. 27, 1877	979	300	11	537
Air-cooling apparatus	C. Pfaune	191,710	June 5, 1877	187	59	11	1002
Air, &c., Engine for pumping and compressing	H. Davey	186,119	Jan. 9, 1877	304	93	11	57
Air-heating attachment	D. McAllister	188,159	Mar. 6, 1877	191	59	11	406
Air-heating furnace	E. H. Doyle	188,729	Mar. 27, 1877	778	239	11	509
Air into vessels containing liquids, Machine for forcing.	J. F. Hess	190,215	May 1, 1877	101	29	11	759
Air-moistening apparatus	C. R. Merrill	188,063	Mar. 6, 1877	102	31	11	394
Air of apartments, Apparatus for moistening the	C. R. Merrill	198,308	Dec. 18, 1877	629	191	12	1052
Air-register	N. K. Joyce	197,476	Nov. 27, 1877	795	287	12	901
Air, Reservoir for compressed	H. Busbnell	194,217	Aug. 14, 1877	445	135	12	301
Air-spring	C. J. A. Dick	193,694	July 31, 1877	1200	359	12	209
Alarm: *See* Burglar-alarm. Clock-alarm. Door-alarm. Low-water alarm. Till-alarm. Till-lock alarm.							
Alarm and registering apparatus	J. Corbett	188,597	Mar. 20, 1877	639	197	11	482
Alarm-lock	W. H. Cline	186,111	Jan. 9, 1877	297	89, 90	11	56
Alarm-lock	G. W. Graham	191,046	May 22, 1877	975	289	11	897
Alarm-lock	J. H. P. Inslee	195,608	Sept. 25, 1877	876	260	12	548
Alarm-lock and door-bell combined	L. Griswold	188,795	Mar. 27, 1877	857	260	11	519
Alarm-register for bar-rooms, &c	S. H. Moffett and O. Deau	194,951	Sept. 4, 1877	194	59	12	427
Album	B. J. Beck	196,776	Nov. 6, 1877	38	11	12	766
Album	A. Foerste	188,507	Mar. 20, 1877	559	172	11	470
Album, Sketching	L. E. M. Burr	185,818	Jan. 2, 1877	6	2	11	9
Album, Tourist's	F. L. Sarmiento	196,992	Nov. 13, 1877	275	81	12	807

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Alcoholic liquors, Apparatus for refining and aging.	G. Clark	192,635	July 3, 1877	81	24	12	23
Alizarine, Obtaining artificial purpurine from	F. de Lalande	188,061	Mar. 6, 1877	101		11	394
Alkali from waste solutions, Apparatus for recovering.	M. Nixon	198,671	Dec. 25, 1877	994	302	12	1114
Alkali, Process and apparatus for putting up caustic.	H. B. Hall and E. Hine	193,330	July 24, 1877	820	251 252	12	147
Alkalies, Apparatus for recovering waste	J. W. Dixon	187,751	Feb. 27, 1877	850	265	11	344
Alkaline waste, Restoring and recovering	W. W. Harding	191,759	June 12, 1877	241		11	1014
Alloy, Composition	F. Raymond	186,876	Jan. 30, 1877	1080		11	187
Alloy for plating metallic articles	M. P. Page	194,365	Aug. 21, 1877	607		12	329
Alum, Manufacture of	G. P. Rockwell	196,043	Oct. 9, 1877	366		12	621
Aluminic sulphate and alum, Manufacturing	C. Lennig	191,160	May 22, 1877	1079		11	911
Amalgamating ores, Process and apparatus for	T. A. D. Forster and G. J. Firmin.	196,212	Oct. 16, 1877	552	160	12	654
Amalgamating-pan	G. Kustel and O. Hofman	197,148	Nov. 13, 1877	434	128	12	831
Amalgamator	T. Walker	191,272	May 29, 1877	1206	362	11	937
Amalgamator, Pan	A. B. Paul	193,030	July 10, 1877	485	146	12	87
Ammonia, Producing the mono or acid phosphate of	J. E. Siebel	196,771	Nov. 6, 1877	34		12	765
Ammonia salts, Obtaining	S. Cabot, jr	193,920	Aug. 7, 1877	118		12	251
Ammonia salts, Treating gas-liquor for	L. S. Fales	195,998	Oct. 9, 1877	321	90	12	614
Ammonia-soda manufacture	E. Solvay	198,699	Dec. 25, 1877	1018	310	12	1118
Ammonia-soda process, Apparatus for continuous decantation in the.	E. Solvay	196,259	Oct. 16, 1877	604	174	12	661
Anchor	F. A. Buck	189,601	Apr. 17, 1877	607	188	11	654
Anchor	C. E. Marshall	195,766	Oct. 2, 1877	72	22	12	571
Anchor, Dredge-boat	F. Hinman	188,364	Mar. 13, 1877	407	127	11	441
Anchor-fluke supporter and tripper	E. Robbins	187,485	Feb. 20, 1877	582	180	11	299
Anchor-point	W. N. Fisher	193,236	July 17, 1877	706	216	12	123
Anchor-tripper	J. P. Dorr, jr	197,348	Nov. 20, 1877	654	193	12	871
Anchors, Manufacture of	W. N. Fisher	193,237	July 17, 1877	706	216	12	124
Animal and vegetable substances, Preserving	J. P. McLean	187,029	Feb. 6, 1877	109	37	11	217
Animal and vegetable substances, Preserving	J. P. McLean	187,030	Feb. 6, 1877	110	11	11	217
Animal black, Artificial	P. G. L. G. Designolle	197,834	Dec. 4, 1877	128		12	964
Animal bones and making artificial whalebones therefrom, Treating.	B. Carples and J. M. Koehler	186,924	Feb. 6, 1877	5		11	203
Animal-cages, Fountain-cup for	O. Lindemann	196,684	Oct. 30, 1877	1049		12	743
Animal-catch	J. L. Wiggin	192,552	June 26, 1877	1088	329	11	1148
Animal-releasing device	C. G. House	191,431	May 29, 1877	1344	407	11	956
Animal-stock	J. Bowman and S. C. Irving	192,672	July 3, 1877	127	35	12	29
Animal-trap	L. H. Adkins	198,064	Dec. 11, 1877	358	111	12	1001
Animal trap	J. C. Ambrose	196,549	Oct. 30, 1877	923	267	12	726
Animal-trap	E. B. Beach	191,298	May 29, 1877	1230	370	11	940
Animal-trap	T. Belknap	186,448	Jan. 23, 1877	662	203	11	122
Animal-trap	E. I. Braddock	192,108	June 19, 1877	609	186	11	1074
Animal-trap	G. Comada	195,703	Oct. 2, 1877	12	4	12	562
Animal-trap	G. Comada	195,704	Oct. 2, 1877	13	4	12	562
Animal-trap	F. Cowan	192,569	July 3, 1877	14	4	12	14
Animal-trap	W. P. Cox	186,806	Jan. 30, 1877	1002	311	11	178
Animal-trap	J. Crawford	196,436	Oct. 23, 1877	785	226	12	696
Auimal-trap	J. S. Crowell	188,343	Mar. 13, 1877	383	120	11	438
Animal-trap	J. B. Cuzner	197,018	Nov. 13, 1877	297	88	12	811
Animal-trap	S. Earle	192,980	July 10, 1877	439	132	12	81
Animal-trap	M. Early	189,346	Apr. 10, 1877	342	109	11	611
Animal-trap	S. B. Fisher	191,329	May 29, 1877	1255	378	11	944
Animal-trap	S. Friend	186,671	Jan. 30, 1877	874	270	11	160
Animal-trap	G. W. Gibson	190,207	May 1, 1877	94	27	11	758
Animal-trap	J. M. Gleichman	191,234	May 29, 1877	1172	351	11	933
Animal-trap	P. A. Herbert	191,052	May 22, 1877	980	291	11	898
Animal-trap	T. N. Hughes	186,252	Jan. 16, 1877	436	134	11	82
Animal-trap	J. H. Irwin	195,133	Sept. 11, 1877	391	118	12	463
Animal-trap	S. McBride	198,246	Dec. 18, 1877	580	175	12	1045
Animal-trap	J. H. Morris	195,632	Sept. 25, 1877	900	267	12	551
Animal-trap	C. M. Orton	193,419	July 24, 1877	905	276	12	159
Animal-trap	J. D. C. Pownall and H. Broomell	188,753	Mar. 27, 1877	803	246	11	513
Animal-trap	A. Reed	186,624	Jan. 23, 1877	825	255	11	144
Animal-trap	J. M. Sackman	195,774	Oct. 2, 1877	78	24	12	572
Animal-trap	L. Stevens	191,260	May 29, 1877	1195	359	11	936
Animal-trap	S. T. Stout	186,898	Jan. 30, 1877	1097	340	11	189
Animal-trap	S. K. Vaughan	195,187	Sept. 11, 1877	448	134	12	471
Animal-trap	H. T. Wigginton	197,706	Nov. 27, 1877	1044	313	12	935
Animals from stalls, Device for releasing	S. B. Martin	196,242	Oct. 16, 1877	586	169	12	659
Annealing apparatus	C. Zug	197,508	Nov. 27, 1877	832	248	12	906
Annealing-furnace	H. B. Chess	186,404	Jan. 16, 1877	606	186	11	102
Annealing-furnace for metals	J. Ives	188,143	Mar. 6, 1877	174	53, 54	11	404
Annunciator. Automatic time-table	L. Dart	196,637	Oct. 30, 1877	1001	292	12	738
Anti-friction compound	G. E. Behrens	189,684	Apr. 17, 1877	688		11	664
Anti-incrustation compound	L. E. Hurd	190,436	May 8, 1877	340	99	11	799
Anvil and vise combined	P. B. Hillyer	191,427	May 29, 1877	1340	406	11	955
Anvil and vise combined	C. A. Parker	196,380	Oct. 23, 1877	739	212	12	689
Anvil, Blacksmith's	H. B. Sevey	189,393	Apr. 10, 1877	390	124	11	617
Anvil, Cast-iron	C. Fisher	189,892	Apr. 24, 1877	923	281	11	703
Apple-corer	J. Fallows	185,902	Jan. 2, 1877	88	27	11	20
Apple corer and quarterer	S. J. Renner	188,819	Mar. 27, 1877	883	268	11	523
Apple-cutter	T. B. East	195,750	Oct. 2, 1877	59	18	12	569
Apple paring and coring and peach paring and stoning machine.	G. Berguer	191,300	May 29, 1877	1231	370	11	941
Apple quartering and coring machine	S. Cooper	196,743	Nov. 6, 1877	6	2	12	761
Apron, Barber's	A. H. Hart	188,737	Mar. 27, 1877	787	242	11	511
Aquarium	M. Paleu and D. Sexton	192,595	July 3, 1877	39	12	12	18
Aquarium, fountain, and flower-stand, Combined	A. Peltier and M. Hoerning	188,941	Mar. 27, 1877	995	305	11	539
Arm-rest	P. R. Wagor	189,157	Apr. 3, 1877	126	45	11	576
Armor-plating for ships, forts, &c	W. Rowlinson	194,053	Aug. 14, 1877	273	81	12	278
Army or hunting knife	F. Schwatka	192,650	July 3, 1877	115	32	12	27
Artist's appliance	W. H. Brownell	193,140	July 17, 1877	606	183	12	110

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Ashes, Leaching coal	T. H. Wrede	185,998	Jan. 2, 1877	183		11	32
Asphaltum to a liquid, Reducing	A. K. Lee	188,646	Mar. 20, 1877	690		11	489
Atmospheric exhauster	A. B. Brown	194,764	Sept. 4, 1877	7	2	12	401
Atmospheric gas-engine	J. Wertheim	192,206	June 19, 1877	709	218	11	1087
Atomizer	W. Kennish	186,208	Jan. 16, 1877	400	122	11	77
Atomizer, Steam	P. Rundquist and T. Angelo	197,057	Nov. 13, 1877	340	160	12	817
Auger	D. E. Henderson	193,406	July 24, 1877	891	272	12	157
Auger, Earth	G. G. Collins	187,705	Feb. 27, 1877	808	251	11	338
Auger, Earth	E. and H. Cox	186,989	Feb. 6, 1877	76	26	11	212
Auger, Earth	D. G. Fields	196,649	Oct. 30, 1877	1020	296	12	740
Auger, Earth	J. Fisher	195,356	Sept. 18, 1877	622	184	12	504
Auger, Earth	G. Fletcher	186,818	Jan. 30, 1877	1014	315	11	180
Auger, Earth	G. B. Franklin	186,821	Jan. 30, 1877	1018	316	11	180
Auger, Earth	I. Hoover	187,759	Feb. 27, 1877	858	267	11	345
Auger, Earth	J. McCullough	187,028	Feb. 6, 1877	109	36	11	217
Auger, Earth	O. H. Polley and D. W. Toles	187,670	Feb. 20, 1877	752	233	11	322
Auger, Earth	W. Shaw	192,463	June 26, 1877	994	299	11	1136
Auger, Earth	G. Watson	187,241	Feb. 13, 1877	323	104	11	258
Auger, Earth	W. H. Yarborough	197,445	Nov. 20, 1877	756	225	12	887
Auger, Hollow	G. N. Stearns	191,817	June 12, 1877	300	93	11	1021
Auger, Post-hole	A. Graham	188,891	Mar. 27, 1877	949	290	11	533
Auger, Post-hole	H. P. Haskin	195,446	Sept. 25, 1877	722	213	12	526
Auger, Post-hole and well	L. M. Lee	198,517	Dec. 25, 1877	846	257	12	1092
Auger shaft-coupling, Well	D. N. Root	192,084	June 19, 1877	590	179	11	1071
Automatic gate	T. E. Breakey	189,300	Apr. 10, 1877	297	94	11	605
Automatic gate	E. J. Coler	186,415	Jan. 23, 1877	628	191	11	118
Automatic gate	J. E. Goldsworthy	190,715	May 15, 1877	646	191	11	845
Automatic gate	M. Miles	188,165	Mar. 6, 1877	199	61	11	406
Awl	G. P. Harley	189,934	Apr. 24, 1877	961	293	11	708
Awl-blanks, Machine for grinding	J. G. Dimond	187,257	Feb. 13, 1877	339	108	11	260
Awl-haft	M. A. Bartlett	194,068	Aug. 14, 1877	288	86	12	2·0
Awl-haft	N. B. Dit Lepine	190,747	May 15, 1877	674	200	11	849
Awl-handle	G. W. Phenix	191,463	May 29, 1877	1380	416	11	960
Awl handle, Pegging	A. N. McDonald	188,530	Mar. 20, 1877	580	179	11	474
Awning and shutter combined	W. A. Hoyt	195,285	Sept. 18, 1877	562	163	12	495
Awning-frame	C. Werner	194,278	Aug. 14, 1877	508	153	12	308
Awning, Vehicle-seat	J. Rigg	195,168	Sept. 11, 1877	428	127	12	468
Ax-helve shield	J. M. Larsh	189,169	Apr. 3, 1877	86	31	11	571
Axes, Machine for making	C. W. Carlot	194,892	Sept. 4, 1877	132	41	12	419
Axes, Manufacture of	W. G. Howell	188,799	Mar. 27, 1877	860	262	11	520
Axle: *See* Car-axle. Vehicle-axle. Carriage-axle. Wagon-axle.							
Axle-box	W. G. Beattie	192,857	July 10, 1877	327	97	12	65
Axle-box	D. Dalzell	189,434	Apr. 10, 1877	429	135	11	622
Axle-box	F. Keiser	192,436	June 26, 1877	970	291	11	1133
Axle-box and spring, Car	A. Calder	197,455	Nov. 27, 1877	776	232	12	898
Axle-box brass, Car	W. F. Jenkins, jr	198,115	Dec. 11, 1877	411	128	12	1014
Axle box, Car	S. A Bemis	194,801	Sept. 4, 1877	47	15	12	407
Axle box, Car	T. A. Bissell	193,593	July 31, 1877	1095	328	12	195
Axle box, Car	T. A. Bissell	194,213	Aug. 14, 1877	441	134	12	300
Axle box, Car	C. E. Caudee	187,352	Feb. 13, 1877	432	136	11	273
Axle box, Car	R. R. Carpenter	194,411	Aug. 21, 1877	649	195	12	335
Axle box, Car	E. L. Coman	190,468	May 8, 1877	373	108	11	803
Axle box, Car	R. B. Eason	191,037	May 22, 1877	969	287	11	896
Axle box, Car	R. B. Eason	193,858	Aug. 7, 1877	56	18	12	212
Axle box, Car	J. Elder	187,835	Feb. 27, 1877	935	290	11	355
Axle box, Car	H. C. Feger	188,118	Mar. 6, 1877	148	45	11	400
Axle box, Car	J. W. Hill	194,351	Aug. 21, 1877	597	178	12	327
Axle box, Car	C. J. Keim	197,379	Nov. 20, 1877	683	204	12	876
Axle box, Car	T. W. Lillard	198,032	Dec. 11, 1877	327	101	12	1002
Axle box, Car	J. A. Picard	188,671	Mar. 6, 1877	169	33	11	395
Axle box, Car	L. Rossiter	198,046	Dec. 11, 1877	340	106	12	1004
Axle box, Car	C. H. Shattuck	188,423	Mar. 13, 1877	465	144	11	449
Axle box, Car	J. D. Webster	191,786	June 12, 1877	269	84	11	1018
Axle box, Car	W. E. Wilcox	191,880	June 12, 1877	306	95	11	1022
Axle box, Car	G. Williams	193,064	July 10, 1877	520	157	12	91
Axle box, Carriage	W. A. Sitton	198,162	Dec. 11, 1877	461	144	12	1022
Axle-box cover, Car	M. Ellis and P. M. Nelson	187,461	Feb. 20, 1877	558	172	11	296
Axle-box covers, Fastening device for	G. S. Winslow	192,667	July 3, 1877	124	34	12	29
Axle-box lid, Car	G. W. Morris	192,524	June 26, 1877	1061	320	11	1144
Axle-box lid, Railway	F. C. L. G. Susemihl and H. H. Hewitt.	192,199	June 19, 1877	704	216	11	1086
Axle-box, Self-oiling	J. Dawber	196,789	Nov. 6, 1877	51	16	12	768
Axle-box, Vehicle	I. N. Camp	192,677	July 3, 1877	132	36	12	30
Axle-box, Vehicle	A. Walter	194,390	Aug. 21, 1877	627	189	12	332
Axle-box, Wagon	C. J. Valentine	194,938	Sept. 4, 1877	183	56	12	425
Axle-boxes, Manufacture of	D. Dalzell	195,805	Oct. 2, 1877	110	33	12	577
Axle-boxes, Manufacture of	G. A. Morse	187,722	Feb. 27, 1877	824	256	11	340
Axle-gage	W. C. Carlton	196,071	Oct. 16, 1877	403	117	12	634
Axle-lubricator	L. Johnson	193,962	Aug. 7, 1877	161	49	12	257
Axle lubricator, Car	J. W. Bellman and J. G. Ernst	190,272	May 1, 1877	158	47	11	766
Axle lubricator, Car	H. Gardiner	188,619	Mar. 20, 1877	656	203	11	485
Axle lubricator, Car	R. Macdonald	186,354	Jan. 16, 1877	550	167	11	95
Axle lubricator, Car	B. G. Martin	188,389	Mar. 13, 1877	436	135	11	445
Axle lubricator, Car	E. McHugh	193,533	July 24, 1877	1016	306	12	174
Axle lubricator, Car	W. Palmer	189,133	Apr. 3, 1877	101	38	11	573
Axle lubricator, Railway-car	G. Lysle, jr	192,337	June 26, 1877	878	265	11	1120
Axle lubricator, Vehicle	G. W. Hall and A. F. Pfaffle	195,269	Sept. 18, 1877	547	159	12	492
Axle-nut, Adjustable	O. B. Thompson	192,031	June 12, 1877	512	156	11	1049
Axle-nut, Adjustable	O. B. Thompson	192,309	June 19, 1877	830	252	11	1102
Axle-skein	P. Weber and H. Damme	197,705	Nov. 27, 1877	1043	313	12	935
Axle skein, Vehicle	S. P. Lovelace	196,367	Oct. 23, 1877	725	208	12	687
Axle-tree, Trussed	J. B. Brewster	186,227	Jan. 16, 1877	416	127	11	79

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B.							
Baby-walker	J. L. Butler	192,413	June 26, 1877	952	285	11	1130
Baby-walker	J. C. Frederick	188,885	Mar. 27, 1877	944	288	11	532
Baby-walker	J. P. Wick	196,730	Oct. 30, 1877	1095	318	12	750
Backwater-trap	L. Brandeis	197,511	Nov. 27, 1877	835	249	12	906
Bag:							
See Feed-bag. Saddle-bag.							
Fruit-bag. Shot-bag.							
Mail-bag. Tobacco-bag.							
Paper bag. Traveling-bag.							
Paper-lined bag.							
Bag-fastener	A. B. Cate	190,666	May 15, 1877	594	176	11	839
Bag-fastener	H. Dunn	198,086	Dec. 11, 1877	379	120	12	1010
Bag-fastener	C. Lazarevitch	188,062	Mar. 6, 1877	102	30	11	394
Bag-fastener	H. Redden	188,673	Mar. 20, 1877	716	219	11	492
Bag-fastening	T. B. Jackson	193,003	July 10, 1877	458	138	12	83
Bag for enveloping beef-quarters, &c	E. S. Halsted	187,008	Feb. 6, 1877	92	31	11	214
Bag-holder	G. M. Allen	186,918	Feb. 6, 1877	1	1	11	203
Bag-holder	J. Eberhard	189,202	Apr. 3, 1877	166	58	11	581
Bag-holder	B. J. C. Howe	187,277	Feb. 13, 1877	358	114	11	263
Bag-holder	M. B. Hudson	191,965	June 12, 1877	447	138	11	1040
Bag-holder	A. Johnson	190,494	May 8, 1877	397	116	11	806
Bag-holder	L. L. Klinefelter	194,155	Aug. 14, 1877	395	117	12	293
Bag-holder	M. P. Moule	192,652	July 3, 1877	102	29	12	26
Bag-holder	E. Woods	191,741	June 5, 1877	215	68	11	1006
Bag holder and filler	J. G. Shurtz	193,351	July 24, 1877	839	257	12	150
Bag-holder and truck combined	H. L. Tobien	195,732	Oct. 2, 1877	43	13	12	566
Bag-machine	W. P. Arnold and G. Quigley	190,663	May 15, 1877	592	175	11	839
Bag-machine	M. and R. W. Murphy	186,866	Jan. 30, 1877	1071	331	11	186
Bag-machine	E. Stanley	191,013	May 22, 1877	946	279, 280	11	893
Baggage-check	H. A. Deraismes	193,441	July 24, 1877	924	281	12	162
Baggage-check	R. F. Livermore	188,522	Mar. 20, 1877	574	177	11	473
Baggage-check guard	D. Untermeyer	187,942	Feb. 27, 1877	1040	320	11	369
Baggage-checks, Attaching	D. Kennedy, jr	197,222	Nov. 20, 1877	527	155	12	852
Bail-ear	H. A. Pond	187,482	Feb. 20, 1877	579	179	10	299
Bail-ear, Bucket	C. D. Seys	188,682	Mar. 20, 1877	723	222	11	493
Bail ear for pails, &c	P. Miles	188,532	Mar. 20, 1877	581	180	11	474
Bail-eye former	H. S. Reynolds	189,264	Apr. 3, 1877	232	77	11	582
Bail-fastening	E. P. Morong	191,248	May 29, 1877	1183	355	11	934
Bail for cast-metal hollow ware	Z. Nickerson	186,947	Feb. 6, 1877	34	13	11	206
Bake-pan	C. Roberts	192,840	July 10, 1877	311	91	12	63
Baker	L. Drew	191,035	May 22, 1877	967	287	11	896
Baker, Altar-bread, wafer, or waffle	R. B. Daly	194,894	Sept. 4, 1877	133	42	12	419
Baking-pan	L. B. Foss	191,578	June 5, 1877	64	19	11	985
Baking-pan	A. J. Hoffman	196,453	Oct. 23, 1877	801	231	12	698
Baking-pan	C. I. Kagey and F. W. Stoneburner.	191,059	May 22, 1877	988	293	11	899
Baking-pan	J. H. Pitts	191,548	June 5, 1877	40	12	11	982
Baking rim and vessel combined	E. F. Beal	195,080	Sept. 11, 1877	339	102	12	454
Balance-rynd	J. Smith and J. Snashell	194,185	Aug. 14, 1877	420	126	12	297
Balance-spring hook	E. Blackman	192,812	July 10, 1877	284	83	12	59
Bale-band connection, Wire	S. L. Thorne	191,269	May 29, 1877	1203	361	11	937
Bale-band tightener	S. J. Chapman	196,431	Oct. 23, 1877	779	225	12	695
Bale-band tightener	J. C. Hodges, jr	195,280	Sept. 18, 1877	556	162	12	494
Bale-band tightener	J. L. Sheppard	188,195	Mar. 6, 1877	233	73	11	410
Bale-band tightener	J. L. Sheppard	189,325	Apr. 10, 1877	327	104	11	609
Bale-band tightening-machine	S. Hughes	195,449	Sept. 25, 1877	725	214, 215	12	526
Bale-bands, Machine for tightening iron	M. Quin	189,138	Apr. 3, 1877	108	39	11	574
Bale-bands, Tightening	N. T. Edson	194,080	Aug. 14, 1877	298	89	12	282
Bale, Hay and feed	C. Brown	197,507	Nov. 27, 1877	923	275	12	919
Bale-hook	H. Hauschildt	187,272	Feb. 13, 1877	254	112	11	262
Bale-tie	A. Barbarin	188,768	Mar. 27, 1877	816	250	11	515
Bale-tie	F. M. Blake	192,730	July 3, 1877	172	50	12	36
Bale-tie	G. Bull and L. Koch	197,824	Dec. 4, 1877	118	37	12	963
Bale-tie	S. J. Chapman	196,432	Oct. 23, 1877	782	225	12	696
Bale-tie	S. J. Chapman	196,433	Oct. 23, 1877	783	226	12	696
Bale-tie	F. Cook	188,725	Mar. 27, 1877	775	238	11	509
Bale-tie	R. De Gray	192,978	July 10, 1877	437	131	12	80
Bale-tie	A. F. Dietz	193,808	Aug. 7, 1877	12	4	12	236
Bale-tie	S. N. Drake	188,607	Mar. 20, 1877	647	200	11	484
Bale-tie	S. N. Drake	188,608	Mar. 20, 1877	648	201	11	484
Bale-tie	S. N. Drake	196,438	Oct. 23, 1877	787	227	12	696
Bale-tie	J. S. Durning	188,610	Mar. 20, 1877	649	201	11	484
Bale-tie	L. E. Evans	186,121	Jan. 9, 1877	306	94	11	58
Bale-tie	J. H. Fisher	188,506	Mar. 20, 1877	558	172	11	470
Bale-tie	G. S. France	187,118	Feb. 6, 1877	192	63	11	229
Bale-tie	G. S. France	188,884	Mar. 27, 1877	943	287	11	532
Bale-tie	J. M. Goldsmith	198,603	Dec. 25, 1877	922	281	12	1104
Bale-tie	J. M. Goldsmith	192,430	June 26, 1877	965	289	11	1132
Bale-tie	T. D. Hannon	191,337	May 29, 1877	1261	380	11	945
Bale-tie	A. J. Hanson	186,675	Jan. 30, 1877	878	271	11	161
Bale-tie	P. Hayden	186,835	Jan. 30, 1877	1039	321	11	182
Bale-tie	B. Hempstead	186,560	Jan. 23, 1877	762	234	11	136
Bale-tie	B. Hempstead	187,758	Feb. 27, 1877	857	267	11	345
Bale-tie	G. F. Jones	187,284	Feb. 13, 1877	307	117	11	264
Bale-tie	I. A. Kilmer	186,579	Jan. 23, 1877	782	241	11	138
Bale-tie	J. M. H. Martin	188,252	Mar. 13, 1877	296	93	11	426
Bale-tie	M. F. Maury	187,161	Feb. 6, 1877	229	75	11	231
Bale-tie	J. W. Petty	185,959	Jan. 2, 1877	148	45	11	28
Bale-tie	J. W. Petty	196,699	Oct. 30, 1877	1061	309	12	746
Bale-tie	J. M. Pollard	188,669	Mar. 20, 1877	712	218	11	492

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Bale-tie	J. M. Pollard	190,076	Apr. 24, 1877	1116	339	11	728
Bale-tie	R. C. Pope	189,258	Apr. 3, 1877	225	76	11	589
Bale-tie	R. C. Pope	195,164	Sept. 11, 1877	425	126	12	468
Bale-tie	J. L. Randolph	194,975	Sept. 11, 1877	227	70	12	439
Bale-tie	W. M. Seaman	197,802	Dec. 4, 1877	97	29	12	959
Bale-tie	J. L. Sheppard	187,184	Feb. 6, 1877	248	81	11	236
Bale-tie	W. Silvester	197,570	Nov. 27, 1877	895	266	12	915
Bale-tie	R. G. Stewart	193,194	July 17, 1877	653	199	12	117
Bale-tie	H. C. Stouffer	190,641	May 8, 1877	547	162	11	826
Bale-tie	D. A. Tompkins	191,291	May 29, 1877	1226	368	11	940
Bale-tie	J. M. Van Derzee	195,857	Oct. 2, 1877	166	46	12	584
Bale-tie	J. P. Varreo	194,939	Sept. 4, 1877	184	56, 57	12	425
Bale-tie	J. P. Verree	192,312	June 19, 1877	833	253	11	1102
Bale-tie	E. Wilson	193,361	July 24, 1877	850	260	12	151
Bale-tie	W. A. Wright	192,477	June 26, 1877	1004	303	11	1138
Bale tie, Cotton	W. Clark	197,602	Nov. 27, 1877	927	276	12	920
Bale tie, Cotton	H. Hamilton	193,946	Aug. 7, 1877	146	44	12	254
Bale tie, Cotton	J. N. Lauth	188,742	Mar. 27, 1877	793	243	11	511
Bale tie, Cotton	J. L. Slocumb	192,297	June 19, 1877	819	249	11	1101
Bale tie, Cotton	W. M. Smith	188,548	Mar. 20, 1877	595	184	11	476
Bale tie, Cotton	S. M. Wilson	189,003	Mar. 27, 1877	1055	324	11	547
Bale tie, Cotton	S. M. Wilson	189,004	Mar. 27, 1877	1055	325	11	547
Bale-tie-twisting machine	E. E. and I. A. Kilmer	189,748	Apr. 17, 1877	756	232	11	672
Bale-tie, Wire	E. P. Bennett	188,845	Mar. 27, 1877	906	275	11	526
Bale-tie, Wire	L. Stewart	191,192	May 22, 1877	1109	331	11	916
Bale-tie, Wire	C. H. Victory	192,852	July 10, 1877	324	95	12	64
Bale-ties, Crimping-tool for fastening	H. C. Stouffer	190,642	May 8, 1877	548	163	11	826
Bale-ties, Instrument for opening	C. Lester	198,398	Dec. 18, 1877	714	217	12	1065
Bale ties, Machine for cutting and punching cotton	J. R. Tobin	189,521	Apr. 10, 1877	507	161	11	633
Baling cotton	L. Belden	197,817	Dec. 4, 1877	109	34	12	962
Baling cotton, &c., Hand power-press for	P. C. Ingersoll	192,762	July 3, 1877	202	58	12	40
Baling-press	E. A. Brooks and R. J. Jordan	194,888	Sept. 4, 1877	129	40	12	418
Baling-press	W. S. Coates	188,591	Mar. 20, 1877	634	196	11	482
Baling-press	N. H. Collins	188,104	Mar. 6, 1877	135	40	11	399
Baling-press	P. K. Dederick	197,207	Nov. 20, 1877	512	151	12	850
Baling-press	J. Drake	197,619	Nov. 27, 1877	948	282	12	923
Baling-press	J. E. Hanger	190,852	May 15, 1877	761	226, 227	11	862
Baling-press	H. S. Laird	196,156	Oct. 16, 1877	497	145	12	647
Baling-press	B. F. Miller	193,265	July 17, 1877	736	225	12	127
Baling-press	Z. Phillips	196,249	Oct. 16, 1877	592	172	12	660
Baling-press on wheels	M. McCarty	194,608	Aug. 28, 1877	848	253	12	371
Ball: *See* Base-ball. Corn ball. Puddlers' ball. Ten-pin ball.							
Ball-thrower for shooting practice	A. H. Bogardus	188,334	Mar. 13, 1877	376	118	11	437
Ball trap	T. Wilkie	191,628	June 5, 1877	109	34	11	991
Balloon	W. Beckley	193,136	July 17, 1877	604	182	12	110
Ballot-box	J. Fricker, jr., and A. Seinecke	193,862	Aug. 7, 1877	59	19	12	243
Ballot-box	W. Siddall	197,529	Nov. 27, 1877	854	254	12	910
Ballot-box, Registering	W. H. Nicolls	185,950	Jan. 2, 1877	139	42	11	26
Ballot-box, Registering	L. Van Alstyne	194,882	Sept. 4, 1877	124	38	12	418
Balusters, Machine for making	P. M. Haas	188,126	Mar. 6, 1877	157	48	11	401
Band, Coil-spring	F. Armstrong	189,986	Apr. 24, 1877	1006	308	11	714
Band, Coil-spring	T. J. Carroll	187,510	Feb. 20, 1877	605	187, 188	11	302
Band cutting implement, Wire	C. H. Chadbourn	190,467	May 8, 1877	372	108	11	803
Band cutting implement, Wire	C. B. Withington	198,442	Dec. 18, 1877	758	229	12	1071
Band or cord for driving machinery	S. Townsend	190,455	May 8, 1877	359	104	11	801
Band or hoop iron, Machine for rolling	F. Nevegold	198,667	Dec. 25, 1877	991	301	12	1114
Bands, Machine for making rectangular	M. Blakey	192,615	July 3, 1877	61	18	12	20
Bank checks, &c., Apparatus for testing	F. and A. D. Grafelmann	194,347	Aug. 21, 1877	594	177	12	327
Barber's and dentist's chair	L. M. Anglo	186,782	Jan. 30, 1877	976	304	11	175
Barber's chair	J. Clough	192,898	Jnly 10, 1877	364	108	12	70
Barber's chair	J. Griendling, sr	190,317	May 1, 1877	200	60	11	772
Barber's chair	O. F. Pfluegner	196,381	Oct. 23, 1877	740	213	12	689
Barber's shears	W. Reed	193,725	July 31, 1877	1224	367	12	213
Barbing machine, Wire	D. C. Stover	196,313	Oct. 23, 1877	671	194	12	680
Bark from wood, Machine for removing	J. Winn	198,327	Dec. 18, 1877	644	196	12	1055
Bark-mill	W. H. Barber	190,182	May 1, 1877	72	20	11	756
Bark-mill	W. F. Mosser	190,777	May 15, 1877	698	206	11	853
Barley-peeling mill	M. Martin	197,043	Nov. 13, 1877	325	96	12	815
Barometers, Packing the joints of	J. P. Simmons	196,995	Nov. 13, 1877	277	82	12	807
Barrel	T. Hanvey	188,128	Mar. 6, 1877	160	49	11	401
Barrell-carrier	N. Oak	188,027	Mar. 6, 1877	70	20	11	389
Barrel-cover	D. F. Dodge	192,326	Jnne 26, 1877	868	262	11	1119
Barrel-cover	J. P. Mallette and J. Walmsley	195,143	Sept. 11, 1877	400	120	12	464
Barrel-cover	D. T. McClellan and T. J. McBride.	191,699	June 5, 1877	178	55	11	1000
Barrel-cover, Transferable	S. W. Sheldon and D. Dunscomb	195,310	Sept. 18, 1877	584	171	12	498
Barrel for holding volatile liquids	R. M. Monroe	194,529	Aug. 28, 1877	782	232	12	361
Barrel for shipping fruits, vegetables, &c., Ventilating.	W. Crowell	194,994	Sept. 11, 1877	248	75	12	442
Barrel-gage	F. Kuhlman	188,803	Mar. 27, 1877	865	263	11	520
Barrel-head	G. M. Breinig	191,644	June 5, 1877	126	29	11	993
Barrel-head	W. H. Murphy	195,634	Sept. 25, 1877	903	268	12	552
Barrel-head	J. L. Thompson	195,675	Sept. 25, 1877	940	280, 281	12	557
Barrel-head	M. L. Thompson	192,664	July 3, 1877	119	33	12	28
Barrel-head	S. Wheeler	187,497	Feb. 20, 1877	592	183	11	301
Barrel-head clamp	T. C. Seaman	197,179	Nov. 13, 1877	466	138	12	835
Barrel-head lining	L. Reed	188,483	Mar. 20, 1877	537	165	11	468
Barrel-head linings, Bundling	L. Reed	196,310	Oct. 23, 1877	669	193	12	679

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Barrel-heads, Machine for making	D. Pomeroy	196,383	Oct. 23, 1877	741	213	12	689
Barrel-hoisting apparatus	S. A. Bates	195,475	Sept. 25, 1877	753	222	12	530
Barrel-holder and skid	G. W. Brown	195,916	Oct. 9, 1877	234	67	12	602
Barrel-hoop, Wooden	J. D. McEachern and D. H. Burrell.	189,869	Apr. 24, 1877	895	273	11	699
Barrel leveling and trussing machine	E. and B. Holmes	188,365	Mar. 13, 1877	408	127	11	441
Barrel-machine	J. Naylor, jr	196,927	Nov. 6, 1877	200	58	12	788
Barrel-machine	J. Tomlinson	195,185	Sept. 11, 1877	446	133	12	471
Barrel-making machine	W. K. Hoback	197,134	Nov. 13, 1877	421	124	12	829
Barrel-reet	C. E. Wilder	186,185	Jan. 9, 1877	368	113	11	65
Barrel-stand	E. C. Wells	194,200	Aug. 14, 1877	431	131	12	299
Barrel trusing and hooping machine	M. L. Deering	194,335	Aug. 21, 1877	580	174	12	325
Barrel-trussing machine	W. Bayley	190,731	May 15, 1877	660	195	11	847
Barrel-trussing machine	P. Beamer	189,176	Apr. 3, 1877	139	50	11	578
Barrel-trussing machine	H. U. Palmer	195,041	Sept. 11, 1877	299	90, 91	12	448
Barrel, Tumbling	J. C. Coonley	190,009	Apr. 24, 1877	1039	317	11	718
Barrel-washer	P. Seibel, jr	198,160	Dec. 11, 1877	459	143	12	1021
Barrel-washer	A. Zoller	191,506	May 29, 1877	1434	432	11	965
Barrels, &c., Adjustable handle for rolling	C. O. Dodge	195,210	Sept. 18, 1877	484	143	12	484
Barrels, casks, &c., Charring the interior of	W. McMurtrie	193,826	Aug. 7, 1877	30	10	12	238
Barrels, casks, &c., Construction of	J. F. Budke	192,358	June 26, 1877	899	269	11	1123
Barrels, &c., Composition for lining	M. Laflin	189,312	Apr. 10, 1877	313		11	607
Barrels, Constructing	E. J. Granger	187,973	Mar. 6, 1877	17	5	11	383
Barrels, Machine for compressing	O. D. Goodell	189,309	Apr. 10, 1877	308	97	11	607
Barrels, Machine for setting up	C. O. Appleby	198,330	Dec. 18, 1877	647	197	12	1055
Barrels, Machine for setting up	W. H. Ewing	188,787	Mar. 27, 1877	847	257	11	518
Barrels, Machine for setting up	W. H. Ewing	188,880	Mar. 27, 1877	940	286	11	531
Barrels, Manufacture of	R. M. Munroe	190,063	Apr. 24, 1877	1101	335	11	726
Barrels, Process and apparatus for charring the interior of	W. McMurtrie	187,162	Feb. 6, 1877	230	75	11	234
Bar: *See* Boiler-furnace bar. Car draw-bar. Claw-bar. Crowbar. Finger-bar. Fire-bar. Furnace fire-bar. Furnace grate-bar. Grate-bar. Harvester finger-bar. Horsesboe-bar. Jail-bar. Jail and prison bar. Nut-blank bar. Planing-machine pressure-bar. Shawl-strap bar. Sky-light bar. Watch-chain bar.							
Bars and tires, Machine for upsetting	H. Ross, sr	198,216	Dec. 18, 1877	533	165	12	1038
Base-ball	D. Hale	187,848	Feb. 27, 1877	952	295	11	357
Basin	J. H. Keyser	190,766	May 15, 1877	691	204	11	851
Basin and sink combined, Wash	G. Jennings	187,147	Feb. 6, 1877	217	71	11	232
Basin, Silt	J. Weidenmann	186,913	Jan. 30, 1877	1112	344	11	191
Basin-stopper	H. W. Carnes	197,543	Nov. 27, 1877	869	258	12	912
Basin, Valve wash	J. E. Boyle	193,799	Aug. 7, 1877	3	1	12	235
Basin, Wash	J. Hamilton	193,116	July 17, 1877	588	177	12	108
Basket	C. H. Ball	188,331	Mar. 13, 1877	374	117	11	437
Basket	I. I. Cole	196,335	Oct. 23, 1877	695	200	12	683
Basket	A. Fox	198,289	Dec. 18, 1877	615	186	12	1050
Basket	J. W. Sicklor	198,696	Dec. 25, 1877	1015	309	12	1117
Basket, Clothes	J. H. Van Arnum	192,851	July 10, 1877	323	95	12	64
Basket, Folding	J. J. Pesinger	190,360	May 1, 1877	240	71, 72	11	778
Basket, Store	H. C. Jones	187,695	Feb. 20, 1877	772	240	11	325
Bath-tub	C. E. L. Holmes	189,559	Apr. 17, 1877	566	176	11	649
Bath-tub, Insulated	W. J. Patton	195,388	Sept. 18, 1877	654	194	12	508
Bather's appliance	A. Hackett and J. H. Coats	186,422	Jan. 23, 1877	634	193	11	119
Bathing apparatus	W. J. Hill	192,164	June 19, 1877	669	205	11	1081
Battery: *See* Galvanic battery. Magnetic battery.							
Batting-folding machine, Cotton	R. Catlow	195,884	Oct. 9, 1877	200	57	12	598
Bayonet	E. Rice	194,051	Aug. 14, 1877	272	81	12	278
Beam and girder roll	J. F. De Buigne	195,207	Sept. 18, 1877	480	142	12	484
Beans and pork for food, Canning	W. K. Lewis	193,880	Aug. 7, 1877	74	24	12	245
Bed, Air	J. M. Macintosh and W. Boggett.	187,397	Feb. 13, 1877	478	149	11	279
Bed attachment, Invalid	B. D. Brown	197,992	Dec. 11, 1877	293	90	12	997
Bed-bottom	F. C. Bartlett	198,335	Dec. 18, 1877	652	198	12	1056
Bed-bottom	A. D. Cooke	198,189	Dec. 18, 1877	506	157	12	1034
Bed-bottom	C. Eade	190,749	May 15, 1877	675	200	11	849
Bed-bottom	C. Eade	197,621	Nov. 27, 1877	951	282	12	923
Bed-bottom	F. P. Edmans	193,148	July 17, 1877	612	185	12	111
Bed-bottom	B. Essig	194,811	Sept. 4, 1877	56	19	12	408
Bed-bottom	J. and F. Herman	197,365	Nov. 20, 1877	670	200	12	874
Bed-bottom	A. Lombart	198,546	Dec. 25, 1877	871	265	12	1096
Bed-bottom	J. J. Lucas	189,943	Apr. 24, 1877	968	296	11	709
Bed-bottom	G. Luciani	194,832	Sept. 4, 1877	76	25	12	411
Bed-bottom	C. Merrick	196,469	Oct. 23, 1877	818	235	12	700
Bed-bottom	T. J. Pettit	198,676	Dec. 25, 1877	999	303	12	1115
Bed-bottom	G. S. Pickett	194,722	Aug. 28, 1877	955	283	12	386
Bed-bottom	J. W. Read and A. L. Howell	196,701	Oct. 30, 1877	1066	310	12	746
Bed-bottom	S. H. Reeves	192,790	July 3, 1877	234	68	12	44
Bed-bottom	W. Smith and A. D. Shomo	196,492	Oct. 23, 1877	846	243	12	704
Bed-bottom	W. W. Snell	197,422	Nov. 20, 1877	726	217	12	883
Bed-bottom	W. M. Ward	195,550	Sept. 25, 1877	819	243	12	510
Bed-bottom and fire-escape	R. O. Collis	195,484	Sept. 25 1877	761	224	12	531
Bed-bottom cover, Spring	K. K. Peck	186,753	Jan. 30, 1877	946	294	11	171
Bed-bottom, Spring	J. P. Allison	196,618	Oct. 30, 1877	982	286	12	735
Bed-bottom, Spring	O. Brewster	193,218	July 17, 1877	682	208	12	121
Bed-bottom, Spring	J. O. Burch	187,961	Mar. 6, 1877	5	2	11	381
Bed-bottom, Spring	C. J. Clements and E. P. Fowler	187,815	Feb. 27, 1877	930	285	11	352
Bed-bottom, Spring	J. F. Coder	187,816	Feb. 27, 1877	921	285	11	352
Bed-bottom, Spring	W. M. Edmane	188,878	Mar. 27, 1877	939	286	11	531

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Bed-bottom, Spring	W. M. Edmans and H. Mott	196,440	Oct. 23, 1877	789	227	12	697
Bed-bottom, Spring	E. S. Field	187,463	Feb. 20, 1877	559	173	11	296
Bed bottom, Spring	J. H. Frizelle	189,553	Apr. 17, 1877	557	173	11	648
Bed-bottom, Spring	O. L. Fuller	197,116	Nov. 13, 1877	405	119	12	826
Bed-bottom, Spring	A. Gordon	194,426	Aug. 21, 1877	668	200	12	337
Bed-bottom, Spring	R. M. Gruwell and C. Newhouse	187,846	Feb. 27, 1877	950	295	11	356
Bed-bottom, Spring	T. R. Jones	189,104	Apr. 3, 1877	81	29	11	570
Bed-bottom, Spring	A. W. Kendrick	187,229	Feb. 13, 1877	310	101	11	257
Bed-bottom, Spring	H. W. Ladd	191,244	May 29, 1877	1180	354	11	934
Bed-bottom, Spring	C. O. Marsh	194,699	Aug. 28, 1877	932	277	12	383
Bed-bottom, Spring	H. Ogborn and T. T. Kendrick	188,478	Mar. 20, 1877	533	164	11	467
Bed-bottom, Spring	S. P. Olney	187,892	Feb. 27, 1877	993	307	11	362
Bed-bottom, Spring	J. H. Palmer	189,382	Apr. 10, 1877	373	121	11	616
Bed-bottom, Spring	C. E. Smith and E. J. Beverstock	190,633	May 8, 1877	536	159	11	825
Bed-bottom, Spring	S. P. Smith	198,423	Dec. 18, 1877	740	224	12	1069
Bed-bottom, Spring	J. I. Spencer	193,567	July 24, 1877	1051	315	12	178
Bed-bottom, Spring	H. Winger	194,795	Sept. 4, 1877	41	13	12	406
Bed-bottoms, &c., Fastener and tightener for cylindrical spiral wire coils in.	L. Canfield	194,330	Aug. 21, 1877	575	172	12	325
Bed, Cabinet	W. P. and D. A. Green and J. W. Williamson.	192,621	July 3, 1877	67	20	12	21
Bed-lounge	A. Rothschild and T. S. Birch	192,085	June 19, 1877	591	180	11	1072
Bed-mat, Child's	O. A. Lirette	194,831	Sept. 4, 1877	75	25	12	411
Bed-pan	C. S. Merriman	195,521	Sept. 25, 1877	798	236	12	527
Bed-slat	A. Watson	188,085	Mar. 6, 1877	120	36	11	396, 397
Bed, Sofa	J. D. Hauschildt	185,918	Jan. 2, 1877	109	33	11	22
Bed, Spring	J. A. Johntry	193,091	July 17, 1877	565	170	12	104
Bed-spring	W. J. Read	197,405	Nov. 20, 1877	710	212	12	880
Bedstead	H. B. Coyle	187,103	Feb. 6, 1877	179	58	11	227
Bedstead	W. Hendley	195,363	Sept. 18, 1877	628	186	12	504
Bedstead	W. J. Myers	190,064	Apr. 24, 1877	1102	335	11	726
Bedstead	W. J. Myers	190,065	Apr. 24, 1877	1103	335	11	726
Bedstead attachment, Invalid	J. P. Beaman	188,568	Mar. 20, 1877	611	189	11	478
Bedstead, Bureau	C. H. Smith	186,632	Jan. 23, 1877	832	257	11	145
Bedstead clothes-clamp	F. Woodward	198,443	Dec. 18, 1877	759	230	12	1072
Bedstead-fastening	G. Luppert	198,639	Dec. 25, 1877	961	293	12	1110
Bedstead, Folding	F. M. Kibbey and J. C. Hall	190,338	May 1, 1877	220	66	11	775
Bedstead, Folding	W. W. Rogers	194,177	Aug. 14, 1877	413	124	12	296
Bedstead head-board	W. W. Lummus	195,296	Sept. 18, 1877	571	166	12	496
Bedstead, Invalid	C. T. Moore	191,068	May 22, 1877	995	296	11	900
Bedstead, Invalid	J. Q. A. Sargent	187,777	Feb. 27, 1877	881	274	11	347
Bedstead, Invalid	W. Spanner	186,694	Jan. 30, 1877	897	278	11	163
Bedstead, Metallic	J. W. C. Peters	195,641	Sept. 25, 1877	908	270	12	553
Bedstead, Sofa	W. E. Buser	197,093	Nov. 13, 1877	383	112	12	823
Bedstead, Sofa	J. C. Christinger	192,110	June 19, 1877	612	186, 187	11	1074
Bedstead, Sofa	F. A. Coleman	188,593	Mar. 20, 1877	636	196	11	482
Bedstead, Sofa	H. Compes	186,199	Jan. 16, 1877	393	120	11	76
Bedstead, Sofa	H. Compes	190,556	May 8, 1877	457	135	11	814
Bedstead, Sofa	A. Hansen	187,133	Feb. 6, 1877	205	67	11	231
Bedstead, Sofa	A. Hansen	195,506	Sept. 25, 1877	785	231, 232	12	535
Bedstead, Sofa	C. Kade	190,335	May 1, 1877	218	65	11	775
Bedstead, Sofa	A. Morris	196,374	Oct. 23, 1877	730	210	12	688
Bedstead, Sofa	W. Ott	186,608	Jan. 23, 1877	809	250	11	142
Bedstead, Sofa	C. V. Stumpf	198,164	Dec. 11, 1877	463	145	12	1022
Bedstead, Wardrobe	S. S. Burr	191,651	June 5, 1877	132	41	11	994
Bedstead, Wardrobe	F. Caulier	187,454	Feb. 20, 1877	552	170	11	295
Bedstead, Wardrobe	R. Cleland	190,957	May 22, 1877	888	263	11	886
Bedstead, Wardrobe	M. Crosby	189,303	Apr. 10, 1877	302	95	11	606
Bedstead, Wardrobe	W. McNaughton	186,744	Jan. 30, 1877	940	292	11	170
Bedstead, Wardrobe	C. Pabst	189,776	Apr. 17, 1877	783	240, 241	11	676
Bedstead, Wardrobe	C. Pabst	192,711	July 3, 1877	158	45	12	34
Bedstead, Wardrobe	W. Sutcliffe	186,507	Jan. 23, 1877	710	218	11	129
Bee-hive	G. W. Akins	186,223	Jan. 16, 1877	413	126	11	79
Bee-hive	T. A. Atkinson	194,635	June 5, 1877	116	36	11	992
Bee-hive	J. H. Baker	186,098	Jan. 9, 1877	285	86	11	55
Bee-hive	J. A. Barker	186,525	Jan. 23, 1877	727	224	11	131
Bee-hive	J. N. Becker	197,814	Dec. 4, 1877	107	33	12	961
Bee-hive	J. Burnham	195,089	Sept. 11, 1877	349	105	12	456
Bee-hive	I. B. Burroughs	195,257	Sept. 18, 1877	536	156	12	491
Bee-hive	J. Coates	189,923	Apr. 24, 1877	950	290, 291	11	707
Bee-hive	O. Colvin	193,752	July 31, 1877	1249	375, 376	12	217
Bee-hive	A. Deardorff, J. W. and A. D. Stutzman.	193,856	Aug. 7, 1877	54	17	12	242
Bee-hive	H. Hatfield	186,728	Jan. 30, 1877	925	287	11	168
Bee-hive	J. Hefner	193,869	Aug. 7, 1877	66	21	12	244
Bee-hive	A. G. Hill	186,562	Jan. 23, 1877	763	234, 235	11	136
Bee-hive	J. Hollingsworth and W. W. Walcott.	195,606	Sept. 25, 1877	874	260	12	548
Bee-hive	G. Kraetzer	190,874	May 15, 1877	785	232, 233	11	864
Bee-hive	J. H. Light	197,481	Nov. 27, 1877	800	239	12	902
Bee-hive	J. P. Long	192,520	June 26, 1877	1058	318	11	1141
Bee-hive	R. McInturff	193,577	July 24, 1877	865	265	12	153
Bee-hive	G. W. McMillon	198,137	Dec. 11, 1877	434	136	12	1018
Bee-hive	D. L. Murff and D. Kyle	194,165	Aug. 14, 1877	462	120	12	294
Bee-hive	H. F. Poggenpohl	191,612	June 5, 1877	94	29	11	989
Bee-hive	M. Potter and S. H. Barnebee	194,048	Aug. 14, 1877	270	80	12	278

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Bee-hive	A. H. Russell	187,911	Feb. 27, 1877	1014	312	11	365
Bee-hive	J. M. Shuck	198,223	Dec. 18, 1877	540	167	12	1039
Bee-hive	C. J. Sperry and L. Chandler	191,620	June 5, 1877	102	31	11	990
Bee-hive	D. Thompson	192,605	July 3, 1877	50	14	12	19
Bee-hive	J. C. Train	196,060	Oct. 9, 1877	383	109	12	623
Bee-hive	J. F. Van Horn	195,422	Sept. 18, 1877	685	203	12	513
Bee-hive	H. Wheaton	189,291	Apr. 3, 1877	265	87	11	593
Bee-hive	J. R. Wheeler	188,452	Mar. 13, 1877	497	154	11	454
Bee-hive	A. T. Wright	195,870	Oct. 2, 1877	178	51	12	586
Bee-hive	I. M. Wright	198,175	Dec. 11, 1877	471	148	12	1022
Bee-hive	N. Zimmerman	190,947	May 15, 1877	859	255	11	874
Bee-hiving apparatus	R. B. Oldt	190,509	May 8, 1877	414	121	11	808
Bees'-wax, Bleaching	H. T. Yaryan	190,995	May 22, 1877	927		11	890
Bees'-wax, Bleaching	H. T. Yaryan	194,799	Sept. 4, 1877	45		12	406
Beefsteak-pounder	E. Hill and V. I. Thurston	198,459	Dec. 25, 1877	789	239	12	1085
Beer, ale, &c., cooler	F. V. Baudelot	189,331	Apr. 10, 1877	332	106	11	610
Beer and other casks, Device for tapping	J. Felbel	192,908	July 10, 1877	373	110	12	71
Beer-barrels, Tap attachment for	J. H. Burns, R. Laig, and H. Von Dehsen.	197,013	Nov. 13, 1877	293	86	12	810
Beer, Birch	J. J. Rogers	198,467	Dec. 25, 1877	798		12	1086
Beer-cask	M. Brand	193,074	July 17, 1877	536	162	12	101
Beer-cask	J. Hoffman	192,916	July 10, 1877	380	112	12	72
Beer-cooler	F. V. Baudelot	189,332	Apr. 10, 1877	333	106	11	610
Beer-cooler	F. Cisar and F. Sochurek	188,282	Mar. 13, 1877	324	102	11	429
Beer-cooler	L. M. Davis	187,219	Feb. 13, 1877	301	98	11	255
Beer-cooler	M. Gottfried	187,128	Feb. 6, 1877	200	66	11	230
Beer-cooler	A. Kunkle	190,340	May 1, 1877	222	66	11	775
Beer-cooler	J. P. Lipps	197,939	Dec. 11, 1877	238	73	12	989
Beer-cooler	J. Stängler	192,539	June 26, 1877	1075	324	11	1146
Beer-cooler	H. Voight	196,956	Nov. 6, 1877	225	67	12	791
Beer-cooling apparatus	C. F. Hovey	196,297	Oct. 23, 1877	654	189	12	677
Beer-forcing apparatus	A. Hersey	195,126	Sept. 11, 1877	384	116	12	462
Beer-forcing apparatus	J. S. Von Nieda	190,103	Apr. 24, 1877	1146	349	11	732
Beer-kegs with bicarbonate of soda, Supplying	J. J. Schillinger	189,269	Apr. 3, 1877	236	79	11	590
Beer-measure	J. McInnes	190,607	May 8, 1877	505	150	11	820
Beer on draft, Apparatus for treating	J. Klein	188,150	Mar. 6, 1877	182	56	11	404
Beer-preserver	A. Redman	193,550	July 24, 1877	1033	310	12	176
Beer, Preserving	J. Bersch	194,324	Aug. 21, 1877	569	171	12	324
Bell	W. H. Nichols	190,242	May 1, 1877	123	37	11	762
Bell, Call	W. J. Cowing	193,753	July 31, 1877	1253	376	12	217
Bell, Call	A. C. Gould	186,338	Jan. 16, 1877	533	161	11	93
Bell, Call	F. Ratcliff	193,996	Aug. 7, 1877	196	59	12	261
Bell, Door	J. P. Connell	186,416	Jan. 23, 1877	629	192	11	118
Bell, Door	W. E. Sparks	189,397	Apr. 10, 1877	394	125	11	618
Bell, Door	W. Winkel	193,023	Aug. 7, 1877	226	67	12	265
Bell, Door and alarm	J. G. Wiggins	193,903	Aug. 7, 1877	102	33	12	249
Bell, Electro-magnetic alarm	P. Seiler	194,933	Sept. 4, 1877	177	55	12	424
Bell-pull	S. T. Varian	195,188	Sept. 11, 1877	449	134	12	471
Bell-ringing device	E. Perry	195,391	Sept. 18, 1877	657	195	12	509
Bell-striking apparatus	G. M. Stevens	195,461	Sept. 25, 1877	739	218	12	528
Bellows	J. Agnew	193,907	Aug. 7, 1877	106	34	12	249
Bellows-indicator	J. E. Treat	191,624	June 5, 1877	105	32	11	991
Belt, Cartridge	A. Mills	193,613	July 31, 1877	1112	334	12	198
Belt-coupling	E. Guerrero	186,128	Jan. 9, 1877	313	95	11	58
Belt, Electro-voltaic	J. Bryan	190,279	May 1, 1877	166	49	11	767
Belt-fastener	J. Bachmann	189,988	Apr. 24, 1877	1008	309	11	715
Belt-fastener	W. Ferguson	197,726	Dec. 4, 1877	19	6	12	949
Belt-fastener	P. Lyons	189,478	Apr. 10, 1877	467	147	11	627
Belt-fastening	A. C. Tyler	196,273	Oct. 16, 1877	619	179	12	663
Belt, Fireman's	F. Costantino	190,829	May 15, 1877	743	220	11	859
Belt, Game and cartridge	A. A. Case and E. W. Bedell	191,027	May 22, 1877	959	284	11	895
Belt-shifter	T. N. Egery	197,840	Dec. 4, 1877	134	40	12	965
Belt-shifter	W. W. Hubbard	187,532	Feb. 20, 1877	623	193	11	305
Belt-tightener	G. Greene	196,222	Oct. 16, 1877	562	163	12	656
Belting	H. A. Crossley	194,993	Sept. 11, 1877	248	75	12	442
Belting	H. Royer	194,846	Sept. 4, 1877	88	29	12	413
Belting	F. H. and J. E. Underwood	186,965	Feb. 6, 1877	51	18	11	208
Belting, Machine	C. Köhsel	196,911	Nov. 6, 1877	184	53	12	785
Belting, Machinery for stretching leather	J. Brady	191,920	June 12, 1877	398	124	11	1034
Belting-rope, Rawhide	H. Royer	191,374	May 29, 1877	1289	390	11	949
Belting, Tubular	W. M. Deutsch	198,451	Dec. 25, 1877	782	237	12	1084
Belting, Vulcanized-rubber fabric for	J. Murphy	198,496	Dec. 25, 1877	827	250	12	1090
Belting, Wire	C. H. Sturmberg	197,681	Nov. 27, 1877	1002	299	12	931
Bench: *See* Wash-bench. Work-bench.							
Bench-dog	W. Lyle	191,693	June 5, 1877	172	53	11	990
Bench-drill	H. D. Brigham	195,685	Sept. 11, 1877	344	104	12	455
Bench-hook	J. Kime	197,144	Nov. 13, 1877	431	127	12	830
Bending, cutting, and punching metal bars, Machine for.	R. Hale	197,357	Nov. 20, 1877	661	{197 198}	12	873
Bending machine, Wood	H. Winter	186,779	Jan. 30, 1877	974	303	11	174
Bending metal bars, Machine for	R. Hale	194,675	Aug. 28, 1877	909	271	12	380
Bending metal plates, Machine for	J. Braun	194,409	Aug. 21, 1877	647	194	12	335
Berry-box	C. W. Weston	196,405	Oct. 23, 1877	758	219	12	692
Berth for ships, &c., Self-leveling	J. C. Thompson	193,837	Aug. 7, 1877	39	13	12	239
Berth for vessels, Self-leveling	D. Parks	197,886	Dec. 4, 1877	178	54	12	971
Berth, Sleeping-car	E. H. Alley and J. H. Faucher	191,218	May 29, 1877	1158	347	11	931
Berth, Sleeping-car	A. E. Barthel	191,098	May 22, 1877	1022	{305 306}	11	904
Berth, Sleeping-car	W. Fette	185,903	Jan. 2, 1877	89	27	11	20
Berths, Register for sleeping-car	C. E. Sargeant	188,420	Mar. 13, 1877	463	144	11	449
Bessemer-converter bottom	A. J. Hawe	188,898	Mar. 27, 1877	956	292	11	534
Bessemer-converter bottom	A. J. Hawe	188,899	Mar. 27, 1877	957	292	11	534
Bessemer-converter bottom	A. J. Hawe	188,900	Mar. 27, 1877	957	292	11	534

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Bessemer-converter bottom	W. H. Haws	193,949	Aug. 7, 1877	148	45, 46	12	255
Bessemer-converter bottom	E. J. Mildren	190,890	May 15, 1877	800	237	11	866
Bessemer-metal and increasing the tensile strength thereof, Uniting.	E. T. Day	192,320	June 19, 1877	845		11	1104
Beton, Manufacture of	J. C. Goodridge, jr.	194,085	Aug. 14, 1877	303		12	282
Beton or concrete, Repairing structures with	J. C. Goodridge, jr.	193,865	Aug. 7, 1877	63	20	12	243
Bevel	J. F. Klinglesmith	189,311	Apr. 10, 1877	311	98	11	607
Bevel, Carpenter's	J. A. Traut	194,851	Sept. 4, 1877	94	30	12	414
Bevel, square, compasses, calipers, &c., Combined	W. E. Brock	196,188	Oct. 16, 1877	528	153	12	651
Beverage, Table	J. J. Rogers	193,038	July 10, 1877	495		12	88
Beverages, Apparatus for carbonating	J. Matthews	198,403	Dec. 18, 1877	718	218	12	1065
Beverages, Flavoring aerated	J. Matthews	189,764	Apr. 17, 1877	772		11	675
Bier, Folding	W. White	186,650	Jan. 23, 1877	847	262	11	147
Billiard-bridge	F. E. Doughty	196,568	Oct. 30, 1877	942	272	12	728
Billiard-chalk cup	H. W. Collender	190,285	May 1, 1877	171	51	11	768
Billiard-chalk holder	H. L. Wharton	194,751	Aug. 28, 1877	987	293	12	390
Billiard-cue	W. Hill	192,044	June 12, 1877	530	163	11	1051
Billiard-cue tip	R. H. Sanborn	195,773	Oct. 2, 1877	77	23	12	572
Billiard-cue trimmer	J. F. Clune	187,601	Feb. 20, 1877	685	213	11	313
Billiard-cushion	J. S. Mansur	193,011	July 10, 1877	466	141	12	84
Billiard-cushion balls, Fastening device for	H. W. Collender	193,751	July 31, 1877	1248	375	12	217
Billiard-register	R. M. Hoe	192,828	July 10, 1877	301	88	12	61
Billiard-table	W. Gardner	193,156	July 17, 1877	617	{187 188}	12	112
Billiard-table	J. Marsden	187,878	Feb. 27, 1877	978	303	11	360
Billiard-table cushion	J. E. Maynadier	187,654	Feb. 20, 1877	740	229	11	320
Billiard-table cushion	J. E. Maynadier	187,655	Feb. 20, 1877	741	229	11	320
Billiard-table cushion	J. E. Maynadier	187,656	Feb. 20, 1877	741	229	11	320
Bills, show-cards, &c., Apparatus for framing	O. C. Brown	191,828	June 12, 1877	315	97	11	1023
Bin: *See* Flour-bin. Meal-bin.							
Binder for letters, Temporary	H. H. Hall	197,776	Dec. 4, 1877	73	23	12	956
Binder, Hand	J. O. Brown	190,701	May 15, 1877	626	186	11	843
Binder, Hand	J. O. Brown	190,702	May 15, 1877	628	187	11	843
Binder, Temporary	W. P. Bissell	190,269	May 1, 1877	155	45, 46	11	766
Binder, Temporary	B. Brower and J. F. Adams	192,109	June 19, 1877	610	186	11	1074
Binder, Temporary	E. Casper	194,648	Aug. 28, 1877	883	263	12	376
Binder, Temporary	P. C. Clausen	198,570	Dec. 25, 1877	891	272	12	1100
Binder, Temporary	G. W. Emerson	187,367	Feb. 13, 1877	450	142	11	275
Binder, Temporary	G. W. Emerson	189,203	Apr. 3, 1877	167	58	11	581
Binder, Temporary	P. England	193,442	July 24, 1877	925	282	12	162
Binder, Temporary	P. England	194,230	Aug. 14, 1877	460	139	12	303
Binder, Temporary	E. F. Hobart	197,469	Nov. 27, 1877	789	236	12	900
Binder, Temporary	J. W. Munday	195,226	Sept. 18, 1877	501	147	12	486
Binder, Temporary	W. H. Naulty	196,306	Oct. 23, 1877	665	192	12	678
Binder, Temporary	T. Orton	193,128	July 17, 1877	597	180	12	109
Binder, Temporary	L. Richoux	188,674	Mar. 20, 1877	717	220	11	492
Binder, Temporary	W. H. Russell	192,791	July 3, 1877	235	68	12	44
Binder, Temporary	J. B. Underwood	187,494	Feb. 20, 1877	589	183	11	300
Bird-cage	S. B. King	186,937	Feb. 6, 1877	26	10	11	205
Bird-cage	A. E. Mook	189,251	Apr. 3, 1877	220	74	11	588
Bird-cage	O. W. Taft	197,427	Nov. 20, 1877	731	219	12	883
Bird-cage awning	S. P. Burton	188,100	Mar. 6, 1877	132	39	11	398
Bird-cage screen	G. W. Chapin	186,711	Jan. 30, 1877	912	282	11	166
Bird-cage support	F. W. Long	190,881	May 15, 1877	791	234	11	865
Bird-cages, Device for holding feed in	W. H. H. Krause	194,357	Aug. 21, 1877	602	180	12	328
Bit: *See* Bridle-bit. Drill-bit.							
Bit-brace	W. A. Ives	195,373	Sept. 18, 1877	639	189	12	506
Bit-brace wrench	C. H. Amidon	193,632	July 31, 1877	1135	340	12	201
Bit-gage	R. Gardiner	191,133	May 22, 1877	1057	316	11	908
Bit-stock	J. T. Matthews	191,540	June 5, 1877	33	10	11	980
Bit-stock	D. Powers	191,815	June 12, 1877	298	92	11	1021
Bit-stock	C. B. Rose	192,018	June 12, 1877	499	153	11	1047
Blackboard	H. L. Kingsley and W. P. Packard.	189,473	Apr. 10, 1877	464	146	11	627
Blackboard-eraser	H. L. Andrews	190,662	May 15, 1877	591	175	11	839
Blackboard-rubber	C. N. Bacon	188,227	May 13, 1877	276	86	11	423
Blackboard-rubber	P. T. Vannice	187,682	Feb. 20, 1877	762	236	11	323
Blacking-box	W. Jamieson	187,636	Feb. 20, 1877	722	224	11	318
Blacking-box	H. D. Mentzel	194,706	Aug. 28, 1877	938	279	12	384
Blacking-box	C. H. Morse and M. Sholes	197,561	Nov. 27, 1877	886	264	12	914
Blacking-box	S. W. Valentine	187,434	Feb. 13, 1877	518	159	11	283
Blacking-box	J. H. Weeks	190,992	May 22, 1877	924	273	11	890
Blacksmith's machine	J. C. Tobin	188,696	Mar. 20, 1877	737	226	11	495
Blackwashing device	N. K. Wade	190,697	May 15, 1877	622	185	11	843
Blanket-case and shelter-tent	O. E. Michaelis	197,878	Dec. 4, 1877	171	52	12	970
Blast-furnace	J. F. Bennett	197,010	Nov. 13, 1877	289	86	12	809
Blast-furnaces, Applying oxygenated air in	C. Hornbostel	191,530	June 5, 1877	23		11	979
Blast-furnaces, Charging and managing	C. Himrod	188,632	Mar. 20, 1877	673	208	11	487
Blind	A. Allen	197,583	Nov. 27, 1877	907	270	12	917
Blind, Inside	A. T. Elford	188,731	Mar. 27, 1877	781	240	11	510
Blind-slat adjuster	J. G. Broemser	189,995	Apr. 24, 1877	1014	311	11	715
Blind-slat adjuster	H. Gaylord	190,847	May 15, 1877	758	225	11	861
Blind-slat operator	S. M. Sherman	194,270	Aug. 14, 1877	498	151	12	307
Blind-slat worker	E. C. Whipple	189,292	Apr. 3, 1877	266	87	11	593
Blind-slats, Machine for compressing the ends of	E. Cather	191,111	May 22, 1877	1035	309	11	905
Blind, Window	J. F. W. Fawcett	191,951	June 12, 1877	431	133	11	1038
Blind, Window	T. A. Smits	192,353	June 26, 1877	895	268	11	1122
Block: *See* Brush-block. Paving-block. Building-block. Printing-block. Meat-block. Pulley-block.							

Alphabetical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Block—Continued:							
See Ribbon-block. Toy building-block. Saw-mill head block. Toy puzzle-block. Tackle-block.							
Blood for forming ornamental articles, Treating	J. Bliss and F. O. Badger	193,846	Aug. 7, 1877	46		12	241
Blotter and paper-clip combined	C. B. Farrington	186,288	Jan. 16, 1877	468	144	11	86
Blotter and ruler combined	M. P. McElhinney	192,926	July 10, 1877	388	115	12	73
Blotting-pad and ruler, Combined	W. H. Bennett	198,560	Dec. 25, 1877	882	269	12	1098
Blow-pipe	T. Fletcher	198,593	Dec. 25, 1877	910	278	12	1103
Blow-pipe	D. R. Porter	192,452	June 26, 1877	986	296	11	1135
Blower	J. C. Overstreet	185,953	Jan. 2, 1877	143	43	11	27
Blower and smoke-consumer for furnaces	L. C. Cook	190,706	May 15, 1877	632	188	11	844
Blower, Fan	B. F. Sturtevant	196,998	Nov. 13, 1877	279	82	12	808
Blower, Fan	J. P. Wilson	195,865	Oct. 2, 1877	174	49	12	585
Blower, Steam-furnace	T. J. Hickey	192,433	June 26, 1877	968	290	11	1132
Blowers in forges, Mechanical movement for operating.	C. Hammelmann	192,623	July 3, 1877	69	20	12	21
Blowing-machine	T. A. Cochrane and J. Hendy	190,828	May 15, 1877	742	220	11	859
Blowing-machine	T. S. Disston	188,108	Mar. 6, 1877	139	41	11	399
Blowing-machine	J. W. Wilbraham	190,943	May 15, 1877	855	253	11	873
Blue-glass sun-bath	H. M. Beidler	188,570	Mar. 20, 1877	613	190	11	479
Board:							
See Bedstead head-board. Mold-board. Card-board. Musical instrument Center-board. sound-board. Cooling-board. Paper board. Dash-board. Piano-forte sounding-board. Game-board. Guide-board. Plaiting-board. Ironing-board. Stove-board. Key-board. Vehicle dash-board. Lap-board. Wash-board.							
Boat:							
See Canal-boat. Life-boat. Ferry-boat. Sectional boat. Folding-boat. Submarine-boat. Ice-boat.							
Boat-detaching apparatus	W. M. Bell	188,039	Mar. 6, 1877	86	25	11	392
Boat-dotaching apparatus	J. Carpenter	187,963	Mar. 6, 1877	7	2	11	381
Boat-knee	D. True	187,939	Feb. 27, 1877	1039	319	11	368
Boat-knee	D. True	195,908	Oct. 9, 1877	227	65	12	601
Boat-launching apparatus	M. Bourke	194,123	Aug. 14, 1877	362	{107 / 108}	12	189
Boat-launching apparatus	J. Strachan	185,986	Jan. 2, 1877	170	52	11	31
Boats and vessels, Construction of	A. Crosby	190,129	May 1, 1877	17	4	11	748
Boats, Construction of	I. H. Higgins and A. T. Gifford	185,919	Jan. 2, 1877	110	33	11	22
Boats, &c., Draw-coupling for	S. M. Fulton	189,854	Apr. 24, 1877	882	269	11	698
Boats, Sliding outrigger for	D. Harrington	188,131	Mar. 6, 1877	163	50	11	402
Bobbin	W. F. Draper	188,784	Mar. 27, 1877	844	256	11	518
Bobbin	J. Mawson	189,243	Apr. 3, 1877	213	72	11	587
Bobbin	O. E. Wait	195,059	Sept. 11, 1877	316	95	12	451
Bobbin	O. E. Wait	195,060	Sept. 11, 1877	317	96	12	451
Bobbin-holder	J. R. Barlow	192,215	June 19, 1877	721	220	11	1088
Bobbin-holder and bobbin for slubbing and fly frames	M. J. Nealon and T. Higgins	192,655	July 3, 1877	106	30	12	26
Bobbin-winder	J. B. Price	198,153	Dec. 11, 1877	450	140	12	1020
Bobbins, Winding, uniting, and grouping	L. L. G. Rice	186,045	Jan. 9, 1877	238	71	11	48
Boiler:							
See Agricultural boiler. Soap-boiler. Culinary boiler. Steam-boiler. Domestic boiler. Steam-engine boiler. House-boiler. Wash-boiler. Kitchen-boiler. Water-tube boiler. Salt-boiler.							
Boiler	R. Excell	186,083	Jan. 9, 1877	270	81	11	53
Boiler	R. Excell	191,326	May 29, 1877	1252	377	11	944
Boiler	G. Seldon and T. M. Nagle	186,762	Jan. 30, 1877	958	298	11	172
Boiler and steam heater, Combined	G. W. Blake	190,949	May 22, 1877	881	261	11	885
Boiler-bottom	C. R. Everson	189,205	Apr. 3, 1877	170	59	11	582
Boiler-cleaner	T. Craney	192,741	July 3, 1877	181	52	12	38
Boiler-cleaner	J. A. Fordan and J. E. Thomas	194,036	Aug. 14, 1877	256	76	12	276
Boiler-cleaner	E. Ransom	194,723	Aug. 28, 1877	956	284	12	386
Boiler-covering	F. B. Stevens	191,262	May 29, 1877	1197	359	11	936
Boiler-covering	R. Thomas	197,000	Nov. 13, 1877	282	83	12	808
Boiler-feed regulator, Electro-magnetic	R. A. Hayes	189,098	Apr. 3, 1877	76	27, 28	11	569
Boiler-feeder	R. Garstang	193,502	July 24, 1877	983	298	12	170
Boiler-feeder	A. I. Sternberg	190,383	May 1, 1877	265	79	11	781
Boiler-feeder	H. L. Traphagen	188,208	Mar. 6, 1877	246	77	11	412
Boiler-furnace	E. Fair	188,733	Mar. 27, 1877	782	240	11	510
Boiler-furnace and air-supplying apparatus	J. E. Crowell	191,518	June 5, 1877	8	3	11	978
Boiler-furnace door, Steam	W. W. Hubbell	187,384	Feb. 13, 1877	465	146	11	277
Boiler-furnace front	G. L. Allen	189,077	Apr. 3, 1877	59	22	11	567
Boiler-furnace grate-bar	R. J. Hancock	192,331	June 26, 1877	871	263	11	1120
Boiler furnace, Steam	H.C.E. Eggers & H.C. Kirchmann	198,587	Dec. 25, 1877	904	277	12	1102
Boiler furnace, Steam	B. Hershey	187,136	Feb. 6, 1877	207	68	11	231
Boiler furnace, Steam	C. F. Hunt	191,433	May 29, 1877	1346	408	11	956
Boiler furnace, Steam	P. W. Lamb	185,829	Jan. 2, 1877	16	5	11	11
Boiler furnace, Steam	H. E. Parson	187,170	Feb. 6, 1877	236	77	11	235
Boiler furnace, Steam	J. Poblig	197,894	Dec. 4, 1877	186	57	12	972
Boiler furnaces, Device for aiding combustion in steam.	W. S. Hutchenson	192,168	June 19, 1877	673	206	11	1082
Boiler-furnaces, Device for feeding air to	H. F. Haydon	196,897	Nov. 6, 1877	167	49	12	784
Boiler furnaces, Fire-bridge for steam	R. K. McMurray	194,780	Sept. 4, 1877	27	9	12	404
Boiler-heads, Machine for flanging	C. Miller and J. Boldon	189,670	Apr. 24, 1877	896	274	11	699
Boiler or kettle for heating water upon oil-stoves	R. E. Killip	193,713	July 31, 1877	1215	364	12	211

Alphabetical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Boiler-plates, Adjustable templets for laying out	J. Morgan	195,721	Oct. 2, 1877	32	10	12	565
Boiler-plates, Machine for shearing	J. W. and R. Johnston	190,763	May 15, 1877	689	203	11	851
Boiler-plates, Machine for shearing	A. Thomson	193,624	July 31, 1877	1127	338	12	199
Boiler-setting	K. M. Jarvis	189,862	Apr. 24, 1877	888	271	11	699
Boiler-tube cleaner	W. Dunn	196,642	Oct. 30, 1877	1011	294	12	739
Boiler-tube expander	O. Pagan	193,275	July 17, 1877	746	228	12	129
Boiler-tube plug	T. R. Hand	188,625	Mar. 20, 1877	662	205	11	485
Boilers and other tubes, Stop-plug for	M. Coryell	189,429	Apr. 10, 1877	423	133	11	621
Bolster and step	M. J. Nealon, T. Higgins, and W. Knott.	186,749	Jan. 30, 1877	944	293	11	170
Bolsters, &c., Fastening for	A. Aldrich	185,847	Jan. 2, 1877	34	10	11	13
Bolt: *See* Combination and seal lock-bolt. Door-bolt. Flour-bolt. King-bolt. Seal-bolt. Wagon-box-strap bolt.							
Bolt and nut	H. A. Harvey	197,466	Nov. 27, 1877	786	235	12	900
Bolt and nut	S. H. James	197,473	Nov. 27, 1877	791	237	12	901
Bolt and rivet cutter	J. Hollwig	188,133	Mar. 6, 1877	165	50	11	402
Bolt-heading machine	G. R. Moore	187,294	Feb. 13, 1877	376	120	11	265
Bolt-heads, Upsetting	J. B. Ford	187,529	Feb. 20, 1877	621	192	11	305
Bolt-lock	E. J. Lockwood	196,914	Nov. 6, 1877	188	54	12	786
Bolt-making machine	G. Dunham	193,644	July 31, 1877	1150	344 345	12	202
Bolt-threading machine	A. F. Jackson	189,226	Apr. 3, 1877	191	65	11	584
Bolting-gage	G. W. Church	196,054	Oct. 16, 1877	408	118	12	635
Bolting-reel	P. M. Bennett and G. C. C. Smith.	187,805	Feb. 27, 1877	905	281	11	351
Bolting-reel	M. Buck	186,537	Jan. 23, 1877	741	227	11	133
Bolting-reel	L. V. Rathbun	194,533	Aug. 28, 1877	785	233	12	362
Bonbon-wrapper	I. J. Van Skelline	187,495	Feb. 20, 1877	590	183	11	301
Bone-black, Cooling apparatus for	C. Doscher	186,327	Jan. 16, 1877	522	158	11	92
Bone-black kiln	W. R. Elmenhorst	188,006	Mar. 6, 1877	49	13, 14	11	387
Bone-black retort	E. E. Quimby	188,029	Mar. 6, 1877	72	20	11	390
Bone-black revivifier	J. Gandolfo	190,676	May 15, 1877	602	178	11	840
Book	J. M. Harper	191,424	May 29, 1877	1333	405	11	955
Book and cover	J. R. and H. H. Edwards	193,494	July 24, 1877	976	296	12	169
Book and cover	I. Reynolds	193,625	July 10, 1877	491	148	12	87
Book and cover	L. D. and I. Reynolds	192,878	July 10, 1877	348	102	12	67
Book, Bank check	M. C. Johnson	191,436	May 29, 1877	1348	409	11	956
Book-binding	E. S. Boynton	193,169	July 17, 1877	582	175	12	107
Book-binding	W. Gilliland	190,677	May 15, 1877	603	179	11	840
Book-binding	G. P. B. Hoyt	188,016	Mar. 6, 1877	58	17	11	388
Book-binding	I. Reynolds	193,626	July 10, 1877	492	148	12	87
Book binding	O. and J. S. Routh	193,183	July 17, 1877	643	195	12	116
Book-binding	F. E. Schmitz	188,544	Mar. 20, 1877	590	183	11	475
Book, Blank	F. Bowman	186,791	Jan. 30, 1877	990	308	11	176
Book, Business check	J. W. Turner	187,068	Feb. 6, 1877	143	47	11	222
Book carrier and holder	E. W. Smith	188,199	Mar. 6, 1877	237	75	11	411
Book-case	C. F. Hill	197,132	Nov. 13, 1877	420	124	12	829
Book-clamp	C. E. Dulin	186,927	Feb. 6, 1877	8	3	11	204
Book-clamp	W. C. Watson	198,437	Dec. 18, 1877	753	228	12	1071
Book-clamp	G. T. Wood	186,915	Jan. 30, 1877	1114	345	11	192
Book-clasp	J. Müller and E. Hilpert	191,992	June 12, 1877	472	145	11	1043
Book, Copy	J. W. Manning	189,944	Apr. 24, 1877	968	296	11	709
Book, Copy	M. A. Requa and E. Dunn	189,574	Apr. 17, 1877	580	180	11	651
Book, Copying	W. A. Anderson	194,026	Aug. 14, 1877	247	73	12	275
Book-cover protector	C. B. Browne	193,139	July 17, 1877	606	183	12	110
Book-displaying rack	H. Huss	197,136	Nov. 13, 1877	423	125	12	829
Book line-indicator	J. Lopez	192,834	July 10, 1877	306	89	12	62
Book-marker	T. P. and S. B. Marshall	194,305	Aug. 21, 1877	548	165	12	321
Book, Memorandum	W. A. Cooke	193,146	July 17, 1877	611	185	12	111
Book-rack, Metallic	I. Reynolds	186,216	Jan. 16, 1877	407	125	11	78
Book-rest	W. W. and L. W. Liles	198,634	Dec. 25, 1877	958	292	12	1109
Book, Scrap	D. R. Breed	187,448	Feb. 20, 1877	547	169	11	295
Book-stitching machine	C. Theine	197,575	Nov. 27, 1877	897	267	12	915
Book-support	G. S. Bailey	188,090	Mar. 6, 1877	123	37	11	397
Book-support	W. S. Barnard	186,974	Feb. 6, 1877	58	20	11	209
Book-support	J. Bondeman	190,117	May 1, 1877	4	2	11	747
Book-support	A. Clarke	197,763	Dec. 4, 1877	60	19	12	954
Book-support	J. and R. Lamb	187,393	Feb. 13, 1877	474	148	11	278
Book-support	E. L. Marshall	192,177	June 19, 1877	680	208	11	1083
Book-support	I. Witwer	197,581	Nov. 27, 1877	906	270	12	917
Books, Box for	E. K. Burke	198,565	Dec. 25, 1877	887	270	12	1099
Books, Metallic self-binder for	H. H. Edwards	186,815	Jan. 30, 1877	1011	314	11	179
Books with staples, Machine for stitching	J. C. Smyth	187,189	Feb. 6, 1877	252	83	11	237
Boom and sail attachment	F. Norwood	186,603	Jan. 23, 1877	804	249	11	142
Booms, &c., Self-adjusting sheave for	J. Edson	190,425	May 8, 1877	327	96	11	797
Boot	E. F. Bickford	196,778	Nov. 6, 1877	39	12	12	766
Boot	W. H. H. Walker	197,699	Nov. 27, 1877	1034	310	12	934
Boot and gaiter strap	S. Hodgins	186,563	Jan. 23, 1877	764	235	11	136
Boot and shoe	J. M. Bibbins	189,333	Apr. 10, 1877	334	106	11	610
Boot and shoe	L. R. Blake	185,814	Jan. 2, 1877	3	1	11	9
Boot and shoe	L. R. Blake	185,815	Jan. 2, 1877	4	2	11	9
Boot and shoe	H. Brossel	190,412	May 8, 1877	316	93	11	796
Boot and shoe	C. Edwards	194,081	Aug. 14, 1877	299	89	12	282
Boot and shoe	J. Fleming	189,444	Apr. 10, 1877	436	137	11	623
Boot and shoe	J. Green	197,929	Dec. 11, 1877	230	70	12	987
Boot and shoe	T. J. Greenwood	190,753	May 15, 1877	678	201	11	850
Boot and shoe	J. Miner	192,780	July 3, 1877	223	64	12	42
Boot and shoe	D. H. Murphy	198,249	Dec. 18, 1877	582	176	12	1045
Boot and shoe	H. Samson	186,958	Feb. 6, 1877	45	16	11	208
Boot and shoe	G. C. Steinhauer	195,414	Sept. 18, 1877	679	201	12	512
Boot and shoe	J. Vosmus	186,629	Jan. 2, 1877	219	66	11	46
Boot and shoe	W. J. Watkins	189,819	Apr. 17, 1877	821	253	11	681

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Boot and shoe	W. W. Whitcomb	197,917	Dec. 4, 1877	213	65	12	976
Boot and shoe	H. White	190,655	May 8, 1877	564	167	11	828
Boot and shoe attachment	J. H. Johnson	186,843	Jan. 30, 1877	1047	323	11	183
Boot and shoe burnishing machine	J. W. Dodge	192,573	July 3, 1877	17	5	12	15
Boot and shoe burnishing machine	M. V. B. and F. N. Ethridge	193,079	July 17, 1877	540	163	12	102
Boot and shoe counter and lining combined	B. J. Stevens	191,895	June 12, 1877	376	116	11	1031
Boot and shoe counter support	W. H. Van Wormer	197,696	Nov. 27, 1877	1031	309	12	933
Boot and shoe counters, Machine for making	J. Kimball	192,582	July 3, 1877	28	9	12	16
Boot and shoe counters, Machine for shaping	G. F. Moore	198,550	Dec. 25, 1877	874	266	12	1097
Boot and shoe counters, Machinery for forming	G. F. Moore	192,341	June 26, 1877	881	266	11	1121
Boot and shoe counters, Machinery for forming	G. F. Moore and R. H. Hurlbut	198,551	Dec. 25, 1877	875	266	12	1097
Boot and shoe crimping apparatus	P. Fischer	196,079	Oct. 16, 1877	414	120	12	635
Boot and shoe edge burnishing machine	C. J. Addy	196,283	Oct. 23, 1877	637	185	12	675
Boot and shoe edge burnishing machine	G. A. Fullerton	190,485	May 8, 1877	390	114	11	805
Boot and shoe edge burnishing machine	C. H Southall	193,622	July 31, 1877	1125	337	12	199
Boot and shoe edge setting and burnishing tool	J. H. Busell	196,288	Oct. 23, 1877	642	186	12	676
Boot and shoe edge trimmer	J. E. Young	198,234	Dec. 18, 1877	553	170	12	1041
Boot and shoe sole-edge-trimming machine	C. J. Addy	197,306	Nov. 20, 1877	608	180	12	864
Boot and shoe sole-edges, Machinery for polishing and setting.	G. F. Read	193,347	July 24, 1877	836	256	12	149
Boot and shoe sole fastening	L. Goddu	188,355	Mar. 13, 1877	395	124	11	440
Boot and shoe sole fastening	L. Goddu	190,575	May 8, 1877	475	142	11	816
Boot and shoe sole fastenings, Machine for making	L. Goddu	188,354	Mar. 13, 1877	393	123	11	439
Boot and shoe heel	M. A. Myers	189,487	Apr. 10, 1877	476	151	11	628
Boot and shoe heel counters, Apparatus for forming	E. Salomon	195,845	Oct. 2, 1877	151	43	12	582
Boot and shoe heel plate	L. W. Buxton and J. P. Greeley	188,854	Mar. 27, 1877	914	278	11	528
Boot and shoe heel protector	L. Richards	192,839	July 10, 1877	311	91	12	63
Boot and shoe heel stiffener	D. Almy	194,397	Aug. 21, 1877	635	191	12	333
Boot and shoe heel stiffener	C. Y. Gardner	193,240	July 17, 1877	709	217	12	124
Boot and shoe heel stiffener	S. Moore and H. Rogers	189,126	Apr. 3, 1877	99	36	11	572
Boot and shoe heel stiffener	N. J. Simonds	189,066	Apr. 3, 1877	52	19	11	566
Boot and shoe heel stiffeners, Manufacture of	N. J. Simonds	189,067	Apr. 3, 1877	53	20	11	566
Boot and shoe heels, Machinery for trimming and burnishing.	A. E. Stickler	194,115	Aug. 14, 1877	353	105	12	187
Boot and shoe heels, Manufacture of	W. B. Arnold	190,113	May 1, 1877	1	1	11	747
Boot and shoe holding device	W. B. Murphy	195,836	Oct. 2, 1877	141	40	12	581
Boot and shoe insole	J. K. Gittens	197,030	Nov. 13, 1877	312	92	12	813
Boot and shoe insole	P. T. Smith and R. L. Cochran	194,184	Aug. 14, 1877	419	126	12	297
Boot and shoe last	J. Batley, J. Keats, and J. Neil	189,418	Apr. 10, 1877	412	130	11	620
Boot and shoe lasting and tacking machine	H. G. Thompson	193,466	July 24, 1877	947	288	12	165
Boot and shoe lasting apparatus	A. O'Donnell	187,551	Feb. 20, 1877	639	199	11	307
Boot and shoe lasting machine	G. W. Copeland, E. Woodward, and M. Brock.	191,937	June 12, 1877	414	128 / 129	11	1036
Boot and shoe lasting machine	G. W. Copeland, E. Woodward, and M. Brock.	197,607	Nov. 27, 1877	932	278	12	921
Boot and shoe lasting machine	J. W. Hatch	193,446	July 24, 1877	928	282 / 283	12	163
Boot and shoe lasting mechanism	J. W. Hatch and H. G. Thompson	193,445	July 24, 1877	927	282	12	162
Boot and shoe nail driving machine	H. Dunham	188,874	Mar. 27, 1877	935	284 / 285	11	531
Boot and shoe nail setting machine	L. Farnsworth	198,590	Dec. 25, 1877	907	277	12	1103
Boot and shoe nailing and tacking machine	C. W. Glidden	197,213	Nov. 20, 1877	519	153	12	851
Boot and shoe nailing and tacking mechanism	C. W. Glidden	197,212	Nov. 20, 1877	518	153	12	851
Boot and shoe nailing machine	L. R. Blake	189,835	Apr. 24, 1877	862	263	11	695
Boot and shoe nailing machine	L. R. Blake	189,836	Apr. 24, 1877	863	264	11	695
Boot and shoe nailing machine	L. R. Blake	189,837	Apr. 24, 1877	865	264	11	695
Boot and shoe nailing machine	H. P. Fairfield	189,850	Apr. 24, 1877	877	268	11	697
Boot and shoe nailing machine	H. P. Fairfield	189,851	Apr. 24, 1877	879	268	11	697
Boot and shoe nailing machine	C. W. Glidden	197,211	Nov. 20, 1877	518	153	12	851
Boot and shoe polishing machine	C. M. Haller	197,216	Nov. 20, 1877	522	154	12	851
Boot and shoe seam	G. Stribley	196,720	Oct. 30, 1877	1085	315	12	748
Boot and shoe seams, Stay for	A. J. Mosher	194,972	Sept. 11, 1877	224	70	12	439
Boot and shoe seams, Stay for	A. Seaver	198,220	Dec. 18, 1877	537	166	12	1039
Boot and shoe shank burnisher	J. Woodley	198,722	Dec. 25, 1877	1041	317	12	1121
Boot and shoe shank support	G. W. Wells	189,161	Apr. 3, 1877	128	46	11	577
Boot and shoe shanks, Machine for making	J. M. Watson	198,525	Dec. 25, 1877	853	259 / 260	12	1093
Boot and shoe sole	S. J. Gordon	186,126	Jan. 9, 1877	312	95	11	58
Boot and shoe sole and toe protector combined	C. Nobs	195,943	Oct. 9, 1877	267	75	12	606
Boot and shoe sole buffer	F. Winslow	190,174	May 1, 1877	64	18	11	754
Boot and shoe sole channeling machine	J. Keats	193,517	July 24, 1877	1002	302	12	172
Boot and shoe sole edge setting and burnishing machine.	T. P. Young	195,069	Sept. 11, 1877	323	98	12	452
Boot and shoe sole pressing machine	T. J. and T. H. Gifford	194,866	Sept. 4, 1877	109	34	12	415
Boot and shoe sole trimming machine	W. E. Forster and W. C. Tolles	190,482	May 8, 1877	387	113	11	804
Boot and shoe sole trimming machine	B. F. Leon	192,585	July 3, 1877	30	10	12	16
Boot and shoe soles, Buffing-roll for	L. S. Graves	186,205	Jan. 16, 1877	397	121	11	77
Boot and shoe soles, Machine for shaping	J. Kimball	191,764	June 12, 1877	245	77	11	1015
Boot and shoe soles, Nail-driving machine for attaching.	J. E. Kimball and E. Merritt	193,965	Aug. 7, 1877	164	50, 51	12	257
Boot and shoe soles, Press for molding	J. H. Walker	186,909	Jan. 30, 1877	1109	343	11	191
Boot and shoe soles, Wheel for dressing	G. Danforth and W. Smith	197,966	Dec. 11, 1877	271	83	12	993
Boot and shoe tacking machine	C. W. Glidden	197,214	Nov. 20, 1877	520	153	12	851
Boot and shoe tip	D. K. Cross	188,005	Mar. 6, 1877	48	13	11	387
Boot and shoe tip	S. Prior	195,398	Sept. 18, 1877	663	196	12	510
Boot and shoe uppers and soles, Machine for uniting	G. McKay	191,874	June 12, 1877	354	109 / 110	11	1028
Boot and shoe uppers, Crimping apparatus for	I. H. and J. D. Spake	190,922	May 15, 1877	831	246	11	871
Boot and shoe uppers, Machine for crimping	E. Corbett	189,845	Apr. 24, 1877	872	266	11	696
Boot, Button gaiter	J. A. Batchelder	186,526	Jan. 23, 1877	728	224	11	131
Boot-cleaner	D. F. Bell	192,967	July 10, 1877	429	128	12	79
Boot-cleaner	W. Condry and M. Quinn	195,801	Oct. 2, 1877	106	31	12	576
Boot-cleaner	D. H. Laurie	190,598	May 8, 1877	496	148	11	819
Boot-cleaner	C. H. Southall	190,256	May 1, 1877	137	41	11	764

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Boot-crimper	A. T. Moore	193,310	July 17, 1877	782	240	12	133
Boot, Gaiter	P. Fischer	196,080	Oct. 16, 1877	414	120	12	635
Boot-jack	J. H. Aufderheide	196,857	Nov. 6, 1877	123	37	12	778
Boot-jack	J. Buzzell	189,336	Apr. 10, 1877	336	107	11	610
Boot-jack	J. F. R. Doisy and H. L. E. Sarrazin.	189,708	Apr. 17, 1877	710	219	11	667
Boot-jack	C. Hull	195,712	Oct. 2, 1877	22	6	12	764
Boot-jack	J. Niver	190,508	May 8, 1877	414	120	11	808
Boot-jacks, Forming blanks for	H. A. Brown	190,735	May 15, 1877	663	196	11	848
Boot-leg supporter	P. McGuigan	194,361	Aug. 21, 1877	604	181	12	328
Boot-tree	J. Miller	191,247	May 29, 1877	1182	355	11	934
Boot-uppers, Crimping form for	J. B. Clair	192,111	June 19, 1877	613	187	11	1075
Boots and shoes, Adjustable safety-sole for	A. P. Watson and C. E. Crane	189,408	Apr. 10, 1877	402	128	11	619
Boots and shoes, Apparatus for cementing rubber	R. S. Woodford	189,827	Apr. 17, 1877	828	256	11	682
Boots and shoes, Edge-ball compound for	C. L. Jones	190,495	May 8, 1877	398		11	806
Boots and shoes, Fastening for attaching buttons to	A. Wisner	197,957	Dec. 11, 1877	258	79	12	992
Boots and shoes, Lacing	N. Evans	189,027	Apr. 3, 1877	18	6	11	561
Boots and shoes, Lacing-stud for	A. Dawes	188,780	Mar. 27, 1877	841	255	11	517
Boots and shoes, Machinery for forming box-toes for	D. B. Reynolds	192,190	June 19, 1877	693	213	11	1085
Boots and shoes, Machinery for making shank-pieces for	J. M. Watson	185,879	Jan. 2, 1877	63	20	11	17
Boots and shoes, Machinery for trimming the sole-edges of	A. Bolling	192,616	July 3, 1877	62	18	12	20
Boots and shoes, Manufacture of	L. R. Blake	185,816	Jan. 2, 1877	4	2	11	9
Boots and shoes, Manufacture of	A. Miller	196,372	Oct. 23, 1877	729	210	12	688
Boots and shoes, Manufacture of	J. S. Turner	191,387	May 29, 1877	1300	394	11	950
Boots and shoes, Manufacturing nailed	L. R. Blake	189,834	Apr. 24, 1877	861	263	11	695
Boots and shoes, Metallic counter or stiffener for	I. O. Mann and G. R. Rankin	192,442	June 26, 1877	978	294	18	1134
Boots and shoes, Saddle-piece for seams of	D. A. Sutherland	194,011	Aug. 7, 1877	214	63	12	263
Boots and shoes, Sand-paper roll and shank-wheel for the soles of	N. M. Seelye	186,761	Jan. 30, 1877	956	297	11	172
Boots and shoes, Uniting the uppers of	D. W. Thompson	187,197	Feb. 6, 1877	259	85	11	237
Boots and shoes, Water-proof insole for	A. M. Daniels	195,886	Oct. 9, 1877	204	58	12	598
Boots, Manufacture of	H. Sauerbier	194,931	Sept. 4, 1877	175	54	12	424
Booting-jack	J. Buzzell	192,485	June 26, 1877	1013	307	11	1139
Booting-jack	H. P. Chaplin	196,073	Oct. 16, 1877	408	118	12	634
Boring, cutting, and polishing tools, Apparatus for actuating	J. J. Greenough	185,860	Jan. 2, 1877	45	14	11	14
Boring-machine	I. S. and J. W. Hyatt	185,928	Jan. 2, 1877	116	35,36	11	23
Boring-machine bit-clamp	F. Dezendorf	198,280	Dec. 18, 1877	609	184	12	1049
Boring machine, Wood-	B. F. Joslyn	187,388	Feb. 13, 1877	469	147	11	277
Boring machine, Wood-	J. D. Shoots	192,793	July 3, 1877	237	69	12	44
Boring wood cylinders	C. Buckley	198,344	Dec. 18, 1877	661	201	12	1057
Bosom-board	J. H. Kane	196,461	Oct. 23, 1877	811	233	12	699
Bosom-form	A. H. Pike	191,365	May 29, 1877	1283	387	11	948
Bottle and basket combined	E. Cusenier, sr	186,311	Jan. 16, 1877	492	150	11	89
Bottle and stopper	J. H. Parker	190,358	May 1, 1877	239	71	11	778
Bottle-closing device	W. H. Hicks	191,283	May 29, 1877	1217	366	11	939
Bottle-closing device	W. H. Hicks	193,870	Aug. 7, 1877	67	22	12	244
Bottle-closing device	W. H. Hicks	195,127	Sept. 11, 1877	385	116	12	462
Bottle-closing device	W. H. Hicks	195,128	Sept. 11, 1877	386	116	12	462
Bottle for hair-dye	T. Divine	186,321	Jan. 16, 1877	500	153	11	91
Bottle for liquid blacking	S. S. Newton	193,381	July 24, 1877	868	266	12	154
Bottle for promoting vegetation	W. S. Schermerhorn	198,159	Dec. 11, 1877	458	143	12	1021
Bottle, Glass	W. C. King	186,938	Feb. 6, 1877	26	11	11	205
Bottle-locking device	E. M. Deey	190,292	May 1, 1877	178	53	11	769
Bottle-neck, Cork-fastening	J. Young	189,007	Mar. 27, 1877	1057	325	11	547
Bottle, Nursing	J. Briere	189,691	Apr. 17, 1877	694	214	11	665
Bottle, Nursing	I. Bullard	194,859	Sept. 4, 1877	103	33	12	415
Bottle, Nursing	L. Meyer	197,156	Nov. 13, 1877	443	130	12	832
Bottle, Nursing	M. A. Michaels	194,454	Aug. 21, 1877	698	208	12	341
Bottle-opener	E. Backer	191,093	May 22, 1877	1015	303	11	903
Bottle-protector	W. C. Stokes	186,635	Jan. 23, 1877	834	258	11	146
Bottle-stopper	C. S. Barnard	195,473	Sept. 25, 1877	751	222	12	530
Bottle-stopper	T. H. Brady	196,624	Oct. 30, 1877	986	288	12	736
Bottle-stopper	F. Doll	195,587	Sept. 25, 1877	858	255	12	545
Bottle-stopper	H. N. Gale	192,117	June 19, 1877	620	189	11	1075
Bottle-stopper	W. H. Hicks	188,293	Mar. 13, 1877	334	105	11	431
Bottle-stopper	T. Hipwell	188,135	Mar. 6, 1877	166	51	11	402
Bottle-stopper	W. Hornfager	194,088	Aug. 14, 1877	309	91	12	283
Bottle-stopper	J. M. Hoyt	186,476	Jan. 23, 1877	686	210	11	125
Bottle-stopper	D. G. Hubbard	193,610	July 31, 1877	1110	333	12	198
Bottle-stopper	W. Morgenstern	194,427	Aug. 21, 1877	669	200	12	337
Bottle-stopper	D. H. Murphy	194,924	Sept. 4, 1877	168	52	12	423
Bottle-stopper	F. W. Perry	197,890	Dec. 4, 1877	182	55	12	972
Bottle-stopper	E. B. Requa	186,270	Jan. 16, 1877	453	139	11	84
Bottle-stopper	C. Sedgwick	189,906	Apr. 24, 1877	934	285	11	704
Bottle-stopper	F. J. Seybold	195,849	Oct. 2, 1877	157	44	12	583
Bottle-stopper	J. Slim	189,801	Apr. 17, 1877	807	249	11	679
Bottle-stopper	D. G. Smith	188,970	Mar. 27, 1877	1027	316	11	543
Bottle-stopper	T. A. Weber	194,491	Aug. 21, 1877	735	219	12	346
Bottle-stopper	C. E. G. Winter	194,204	Aug. 14, 1877	434	132	12	299
Bottle stopper and fastening	H. B. Anderson	195,970	Oct. 9, 1877	293	82	12	610
Bottle-stopper fastener	W. H. Hicks	196,527	Oct. 30, 1877	901	260	12	722
Bottle-stopper fastener	W. North	197,396	Nov. 20, 1877	699	210	12	879
Bottle-stopper fastener	J. H. Parkhurst	191,251	May 29, 1877	1186	356	11	935
Bottle-stopper fastener	F. J. Seybold	194,788	Sept. 4, 1877	35	11	12	405
Bottle-stopper fastener	F. J. Seybold	195,458	Sept. 25, 1877	736	217	12	528
Bottle-stopper fastening	F. Schlich	190,254	May 1, 1877	136	40	11	764
Bottle-stoppers and bungs, Production of wooden	F. A. Howig	197,220	Nov. 20, 1877	526		12	852
Bottle-stoppers, Valve-nozzle for	C. Cristadoro	189,611	Apr. 17, 1877	617	191	11	655
Bottle-stopping apparatus	J. L. Besnard	196,867	Nov. 6, 1877	132	40	12	779
Bottle-stopping apparatus	T. Rule	196,936	Nov. 6, 1877	210	61	12	789
Bottle, Table-salt	H. J. White	198,554	Dec. 25, 1877	877	267	12	1097

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Bottle-top cover	F. M. Piper	186,690	Jan. 30, 1877	893	276	11	163
Bottle-washer	A. Fisher	188,882	Mar. 27, 1877	942	287	11	531
Bottle-washer	E. C. Turbeville	189,669	Apr. 17, 1877	673	208	11	663
Bottles, &c., Device for preventing the unauthorized removal of corks from.	C. L. Bell	193,684	July 31, 1877	1191	357	12	208
Bottles, &c., in cases, Packing	E. Vorster	192,956	July 10, 1877	419	125	12	78
Bottles, Registering device for	E. Zahringer	186,512	Jan. 23, 1877	714	219	11	129
Bottling-machine	A. Christin	186,798	Jan. 30, 1877	996	309	11	177
Bottling-machine	W. H. Kelley	191,596	June 5, 1877	78	24	11	987
Bottling-machine	W. A. Ross	194,726	Aug. 28, 1877	957	284	12	386
Bougie	S. St. John	197,060	Nov. 13, 1877	342	101	12	817
Bouquet-holder	T. B. Hodge	197,219	Nov. 20, 1877	526	155	12	852
Box: *See* Axle-box. Ballot-box. Berry-box. Blacking-box. Butter-box. Cigar-box. Cigar show-box. Change-box. Coal-box. Cock-box. Coin-box. Collar-box. Core-box. Cotton-gin-roll box. Dice-box. Fare-box. Fire-alarm-signal box. Fuel-box. Goods-box. Hat-box. Honey box. Journal-box. Letter-box. Locomotive fire-box. Locomotive sand-box. Match-box. Metallic collar-box. Miter-box. Paper box. Paper fruit-box. Pin-box. Plant-box. Post-office box. Refrigerating shipping-box. Registering ballot-box. Shafting box. Spice-box. Spool show-box. Steam-boiler fire-box. Steam-engine-stuffing box. Telegraph-signal box. Tobacco-box. Toy money-box. Wood and coal box. Wooden box. Work-box.							
Box	E. G. Gollner	192,983	July 10, 1877	441	132	12	81
Box and book shelf	D. Lothrop	193,339	July 24, 1877	828	254	12	148
Box and box-holder	J. A. Cotten	190,471	May 8, 1877	378	110	11	803
Box-cover, &c., fastening	W. I. Winne	195,866	Oct. 2, 1877	174	49	12	586
Box-fastener	J. C. Millard	193,020	July 10, 1877	475	143	12	85
Box-fastener	W. I. Winne	195,874	Oct. 2, 1877	181	52	12	587
Box for collars and other articles, with top for games	S. H. Green and A. H. Tift	192,756	July 3, 1877	197	56	12	39
Box-iron	J. G. Ruger	198,314	Dec. 18, 1877	633	192, 193	12	1053
Box-irons, Heating	F. Stichbury	185,984	Jan. 2, 1877	168	52	11	31
Box-nailing machine	A. P. Goodhue	187,843	Feb. 27, 1877	947	294	11	356
Box or package	M. A. Carman	197,542	Nov. 27, 1877	868	258	12	912
Box-trimming machine	C. Bopp	188,573	Mar. 20, 1877	615	191	11	479
Boxes, Manufacture of	F. Zuenkeler	188,720	Mar. 20, 1877	760	233	11	498
Brace: *See* Carriage-top brace. Chair-brace. Ratchet-brace. Respiratory-brace. Shoulder-brace. Vehicle-spring brace.							
Bracelet, &c	C. H. Graef	193,701	July 31, 1877	1205	361	12	210
Bracelet	J. Hackenberg	195,004	Sept. 11, 1877	257	78	12	443
Bracelet	W. A. and G. P. Hammond and W. Krymer.	191,140	May 22, 1877	1062	318	11	909
Bracelet	F. Lichtenfels	197,937	Dec. 11, 1877	237	73	12	988
Bracket: *See* Adjustable bracket. Dental bracket. Flower-bracket. Gas-bracket. Lamp-bracket. Sewing-machine-table lamp-bracket. Shingling-bracket. Window-bracket.							
Bracket	E. H. Bates	189,833	Apr. 24, 1877	859	263	11	695
Bracket	J. B. Sargent	191,718	June 5, 1877	193	61	11	1003
Braid, Corded edge	F. W. Huppelsberg	192,262	June 19, 1877	777	236	11	1095
Braid-package clasp	D. and D. L. Goff	198,375	Dec. 18, 1877	693	211	12	1062
Braid-roll clasp	J. Cockcroft	193,487	July 24, 1877	966	293	12	168
Braiding-machine	G. F. James	197,374	Nov. 20, 1877	678	202, 203	12	875
Braiding-machine	F. Whelan	198,230	Dec. 18, 1877	549	169	12	1041
Braiding-machine	A. Wietlisbach	193,791	July 31, 1877	1295	388, 389	12	223
Braiding-machines, Return-gear for	J. Keleher, jr	198,244	Dec. 18, 1877	579	175	12	1044
Brake: *See* Air and vacuum brake. Car-brake. Car train-brake. Elevator-brake. Flax-brake. Sled-brake. Steam and air brake. Vehicle-brake. Wagon-brake. Wheel-brake.							
Brake beam and shoe	F. J. Kimball	192,266	June 19, 1877	780	237	11	1096
Brake-lever	W. F. Osborn	194,926	Sept. 4, 1877	171	53	12	424
Brake-lever	E. H. Wheeler	190,458	May 8, 1877	363	105	11	802
Brake-shoe holder	B. E. Atwood	198,331	Dec. 18, 1877	649	197	12	1055
Bran-duster	W. Yeakle	194,285	Aug. 14, 1877	517	156	12	309
Bran, Treating	E. O. Pease	186,871	Jan. 30, 1877	1077	333	11	187
Brass, Compound for cleaning and polishing	W. H. Bertram	190,407	May 8, 1877	311		11	795
Bread-cutter	A. Anderson	186,096	Jan. 9, 1877	284	85	11	54
Bread-cutter	R. W. Davis	194,417	Aug. 21, 1877	656	197	12	336
Bread-cutter	G. B. Heath	186,248	Jan. 16, 1877	433	133	11	81

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Breastpin-fastening	C. E. Smith	197,745	Dec. 4, 1877	39	13	12	952
Breastpin-tongue	L. Van Doren	194,277	Aug. 14, 1877	507	153	12	308
Brewers' grains, Process of and apparatus for drying	H. and S. H. Chapman	195,573	Sept. 25, 1877	843	250, 251	12	543
Brewers' pitch, Manufacture of	A. Martin	194,701	Aug. 28, 1877	934		12	383
Brewers' vat and steep-tank valve	F. W. Wolf	187,210	Feb. 6, 1877	270	89	11	239
Brick	T. F. Adams	189,676	Apr. 17, 1877	679	210	11	663
Brick and tile lifter	J. Braislin and J. A. Wood	186,303	Jan. 16, 1877	481	148	11	88
Brick, &c., Burning stone-coal slack in manufacture of.	B. H. Warburg	188,703	Mar. 20, 1877	745	228, 229	11	496
Brick compound, Fire	G. R. Evans and W. P. Prescott	198,284	Dec. 18, 1877	612		12	1049
Brick-kiln	E. W. Bingham	186,706	Jan. 30, 1877	907	281	11	165
Brick-kiln	E. W. Bingham	188,277	Mar. 13, 1877	318	101	11	429
Brick-kiln	W. H. Brush	194,987	Sept. 11, 1877	241	73	12	441
Brick-kiln	W. T. Christy	192,634	July 3, 1877	80	24	12	23
Brick-kiln	W. S. Colwell	187,217	Feb. 13, 1877	300	98	11	255
Brick-kiln	W. S. Colwell	187,515	Feb. 20, 1877	609	189	11	303
Brick-kiln	H. Dickson	190,132	May 1, 1877	20	5	11	749
Brick-kiln	H. Dueberg	187,109	Feb. 6, 1877	184	60	11	228
Brick-kiln	J. H. Kelley	195,895	Oct. 9, 1877	215	61	12	599
Brick-kiln	E. R. McDougal	190,060	Apr. 24, 1877	1099	334	11	726
Brick-kiln	C. F. Peck	198,673	Dec. 25, 1877	995	303	12	1114
Brick-kiln	J. A. Schultz	191,376	May 29, 1877	1291	391	11	949
Brick-kiln furnace	H. W. Adams, jr	187,243	Feb. 13, 1877	324	104, 105	11	258
Brick-kiln furnace	A. W. Duty	190,201	May 1, 1877	88	25	11	158
Brick-kiln furnace	J. Old	187,891	Feb. 27, 1877	992	307	11	362
Brick-machine	R. W. Brownhill	196,782	Nov. 6, 1877	44	13, 14	12	767
Brick-machine	T. J. Davis	187,359	Feb. 13, 1877	443	139, 140	11	274
Brick-machine	C. W. Eastwood	198,585	Dec. 25, 1877	902	276	12	1102
Brick-machine	W. E. Gard	195,923	Oct. 9, 1877	240	68, 69	12	603
Brick-machine	W. A. Graham	191,800	June 12, 1877	279	87, 88	11	1019
Brick-machine	W. L. Gregg	192,431	June 26, 1877	966	290	11	1132
Brick-machine	M. Hasslacher	196,752	Nov. 6, 1877	16	5	12	763
Brick-machine	J. L. Haws	193,245	July 17, 1877	714	218	12	125
Brick-machine	J. G. and H. T. Henderson and M. Rhodes.	196,118	Oct. 16, 1877	461	134	12	641
Brick-machine	T. James	192,763	July 3, 1877	203	58	12	40
Brick-machine	H. Lindsey	195,378	Sept. 18, 1877	645	191	12	507
Brick-machine	T. McNicholas	190,505	May 8, 1877	410	119	11	808
Brick-machine	H. C. Sargeant	195,199	Sept. 11, 1877	453	137	12	473
Brick-machine	C. Schlickeysen	189,270	Apr. 3, 1877	236	79	11	590
Brick-machine	G. S. Selden and J. N. McLean	194,787	Sept. 4, 1877	33	11	12	405
Brick-machine	Z. Vanier	197,576	Nov. 27, 1877	899	267, 268	12	916
Brick machine and mold	R. A. Kearns, W. D. Lewis, and W. M. Jenkins.	198,119	Dec. 11, 1877	414	129	12	1015
Brick-machine cutter	E. Spragne	186,024	Jan. 2, 1877	214	65	11	45
Brick-machine, Hydraulic	E. Rogers	195,169	Sept. 11, 1877	428	127, 128	12	468
Brick-machines, Mold-wheel for	H. L. Oliver	194,838	Sept. 4, 1877	81	26, 27	12	412
Brick-making machine	W. J. Blair	197,539	Nov. 27, 1877	866	257	12	911
Brick, Manufacture of	J. Greenawalt and J. C. Anderson	192,986	July 10, 1877	443	133	12	81
Brick-mold	S. Folwell	198,096	Dec. 11, 1877	390	122	12	1011
Brick-molds, Bottom board for	E. Sprague	186,023	Jan. 2, 1877	213	65	11	45
Brick-molds, Machine for sanding	S. W. Babcock	191,018	May 22, 1877	952	282	11	894
Brick-molds, Machine for sanding	B. F. Hawes	198,385	Dec. 18, 1877	704	214	12	1063
Bricks, Machine for making and pressing	J. K. Caldwell	192,226	June 19, 1877	732	224	11	1090
Bricks, Machine for repressing	J. Gregg, jr	197,628	Nov. 27, 1877	957	281	12	924
Bricks, Manufacture of ornamental glazed	W. D. and W. Cliff	186,112	Jan. 9, 1877	298		11	56
Bricks, tiles, &c., from slag or scoria, Machine for making.	J. Woodward	191,504	May 29, 1877	1433	432	11	965
Bricks, tiles, lime, &c., Air-blast kiln for burning	H. W. Adams	196,105	Oct. 16, 1877	442	129, 130	12	639
Bridge	E. E. Colby	187,513	Feb. 20, 1877	607	188	11	303
Bridge	W. Irelan	190,437	May 8, 1877	340	99	11	799
Bridge	T. Mullin	192,450	June 26, 1877	984	296	11	1135
Bridge	E. S. Sherman	191,552	June 5, 1877	43	13	11	982
Bridge, Draw	M. McGrath	193,825	Aug. 7, 1877	30	10	12	238
Bridge, Draw	R. C. Mounsdon	189,320	Apr. 10, 1877	322	101	11	608
Bridge-eyes, Machine for making	C. Kellogg	196,299	Oct. 23, 1877	657	190	12	678
Bridge-gate	N. Behrens	197,816	Dec. 4, 1877	109	34	12	961
Bridge-joint	T. Ruick	188,678	Mar. 20, 1877	720	221	11	493
Bridge lock and signal, Draw	O. H. Perry and E. P. Watson	195,160	Sept. 11, 1877	420	124	12	467
Bridge-pier	O. Avery, jr., and C. Bartholomew	189,170	Apr. 3, 1877	134	48	11	577
Bridge-pier	O. Avery, jr., and C. Bartholomew	189,171	Apr. 3, 1877	136	49	11	578
Bridge-pier	E. E. Colby	189,020	Apr. 3, 1877	10	4	11	560
Bridge, Suspension	R. B. Osborne	194,717	Aug. 28, 1877	948	282	12	385
Bridge, Thorough-brace	J. P. Derr	198,580	Dec. 25, 1877	898	275	12	1101
Bridge, Truss	R. H. Davies	190,562	May 8, 1877	461	137	11	814
Bridge, Truss	L. W. Densmore	188,107	Mar. 6, 1877	137	41	11	399
Bridge, Truss	R. B. Osborne	197,286	Nov. 20, 1877	588	174	12	862
Bridge, Truss	J. H. Snyder	190,921	May 15, 1877	830	246	11	870
Bridge, Tubular	G. E. King	196,154	Oct. 16, 1877	495	144	12	646
Bridges, Safety-gate for draw	D. Arndt	186,971	Feb. 6, 1877	56	19	11	209
Bridges, Timber-splice for	A. W. Hubbard and L. B. Eddy	195,820	Oct. 2, 1877	127	86	12	579
Bridle	G. M. Strong	189,283	Apr. 3, 1877	256	85	11	592
Bridle	O. F. Webster	196,277	Oct. 16, 1877	624	180	12	664
Bridle and halter	J. Straus	185,985	Jan. 2, 1877	170	52	11	31
Bridle and halter combined	W. Schmolze	188,421	Mar. 13, 1877	464	144	11	449
Bridle attachment	S. S. Cummings	189,341	Apr. 10, 1877	338	108	11	610
Bridle, Automatic feed	C. H. Williams	193,584	July 24, 1877	1067	320	12	180
Bridle-bit	F. Crane	188,726	Mar. 27, 1877	775	238	11	509

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Bridle-bit	W. M. Hutton	190,969	May 22, 1877	899	266	11	887
Bridle-bit	F. B. Kuehnhold	190,876	May 15, 1877	788	233	11	865
Bridle-bit	A. C. Tickner	190,646	May 8, 1877	554	164	11	827
Bridle-bit	R. H. Truitt	187,201	Feb. 6, 1877	262	86	11	238
Bridle-bit	R. E. Whitman	194,202	Aug. 14, 1877	433	131	12	299
Bristle-mixer	T. Dost	196,343	Oct. 23, 1877	700	202	12	684
Broiler	O. Edwards	195,995	Oct. 9, 1877	318	89	12	614
Broiler	C. D. Symonds	189,519	Apr. 10, 1877	504	159	11	632
Broiler and toaster	A. C. Bolton	193,393	July 24, 1877	880	269	12	155
Broiling, toasting, &c., Culinary utensil for	W. E. Brock	195,087	Sept. 11, 1877	345	104	12	455
Bronzing articles of iron	J. M. Spring	197,572	Nov. 27, 1877	896		12	915
Bronzing-machine	W. and J. Braidwood	192,223	June 19, 1877	728	223	11	1089
Bronzing-machine	L. Poirier	194,261	Aug. 14, 1877	488	{147 / 148}	12	306
Broom	J. Davidson	191,940	June 12, 1877	421	130	11	1037
Broom	T. R. Evans	187,368	Feb. 13, 1877	451	142	11	275
Broom	W. M. Jackson	186,254	Jan. 16, 1877	438	135	11	82
Broom	W. M. Jackson	194,042	Aug. 14, 1877	263	78	12	277
Broom	A. C. Jaques	186,678	Jan. 30, 1877	881	272	11	161
Broom	H. M. Jenkins	197,858	Dec. 4, 1877	149	46	12	967
Broom	J. Lay	187,541	Feb. 20, 1877	631	196	11	306
Broom	W. H. Paton	195,639	Sept. 25, 1877	906	270	12	552
Broom	J. and T. Roney	191,373	May 29, 1877	1289	390	11	949
Broom	A. Stephen	190,726	May 15, 1877	656	194	11	847
Broom and brush	S. M. Barrett	187,346	Feb. 13, 1877	427	134	11	272
Broom and brush rack	J. B. Clark, jr	189,606	Apr. 17, 1877	613	190	11	655
Broom-bunching apparatus	D. Van Wicklen	186,773	Jan. 30, 1877	970	301	11	174
Broom-hanger	W. Altick	187,797	Feb. 27, 1877	899	279	11	350
Broom-heads, Machine for making	D. Squier	190,095	Apr. 24, 1877	1136	{345 / 346}	11	730
Broom-holder	S. J. Van Stavoren	187,202	Feb. 6, 1877	263	86	11	238
Broom-machine	G. W. Chodrick	188,003	Mar. 6, 1877	47	13	11	387
Broom-machine	C. E. Lipe	189,240	Apr. 3, 1877	205	70, 71	11	586
Broom-making machine	W. Cady	186,077	Jan. 9, 1877	265	80	11	52
Broom-rack	S. W. Sheldon	196,599	Oct. 30, 1877	969	281	12	732
Broom-support	G. Uibel	198,714	Dec. 25, 1877	1033	314	12	1120
Broom-winding machine	J. Gray	191,048	May 22, 1877	977	290	11	897
Brush	R. Bisbee	193,137	July 17, 1877	605	183	12	110
Brush	B. L. Budd	190,120	May 1, 1877	7	3	11	748
Brush	W. B. Burtnett and G. W. Cook	198,567	Dec. 25, 1877	889	271	12	1099
Brush	R. W. Champion	190,821	May 15, 1877	736	218	11	858
Brush	B. R. Hill, sr	196,802	Nov. 6, 1877	65	20	12	770
Brush	T. Jesson and T. Duggan	195,016	Sept. 11, 1877	271	83	12	445
Brush	W. E. Lawrence and C. E. L. Holmes.	192,833	July 10, 1877	305	89	12	62
Brush	H. Lumbard	192,075	June 19, 1877	583	177	11	1070
Brush	J. P. Poland	188,536	Mar. 20, 1877	584	181	11	474
Brush	J. P. Poland	196,167	Oct. 16, 1877	505	147	12	648
Brush	H. Rosenthal	188,959	Mar. 27, 1877	1017	312	11	542
Brush	G. S. Snell	191,259	May 29, 1877	1195	358	11	936
Brush	J. Waddell	191,388	May 29, 1877	1301	394	11	950
Brush and broom support	J. S. Lash	194,446	Aug. 21, 1877	690	206	12	340
Brush and cane cutter	O. Pickering	188,070	Mar. 6, 1877	109	33	11	395
Brush-blocks, Machine for boring	O. D. and E. C. Woodbury	195,869	Oct. 2, 1877	176	50	12	586
Brush, Cylindrical	J. Kistler	193,519	July 24, 1877	1004	303	12	172
Brush for cleaning boiler-flues	J. H. Davis	190,960	May 22, 1877	891	263	11	886
Brush, Fountain	H. M. Jenkins	195,015	Sept. 11, 1877	271	83	12	445
Brush-handle	I. L. Landis	186,399	Jan. 16, 1877	601	184	11	101
Brush-handles, Machine for making	J. L. Whiting	190,941	May 15, 1877	853	253	11	873
Brush-holder	G. Brintzinhoffer	195,086	Sept. 11, 1877	345	104	12	455
Brush, Horse	C. W. Beiser	188,843	Mar. 27, 1877	904	275	11	526
Brush-machine	J. D. Baker	190,999	May 22, 1877	929	275	11	891
Brush-machine	J. L. Whiting	192,802	July 3, 1877	247	72	12	45
Brush machine, Wire	J. Ashworth	195,075	Sept. 11, 1877	332	101	12	454
Brush-making machine	T. Jesson and T. Duggan	195,017	Sept. 11, 1877	272	83	12	445
Brush, Marking	J. M. Patterson	186,752	Jan. 30, 1877	946	294	11	171
Brush, Metallic	W. Barbour	197,005	Nov. 13, 1877	285	84	12	809
Brush, Shoe	W. B. Seal	188,422	Mar. 13, 1877	464	144	11	449
Brush, Shoe	S. Shaw	194,620	Aug. 28, 1877	860	256	12	373
Brush, Shoe	A. Worthington	193,308	July 17, 1877	780	239	12	133
Brush, Shoe-blacking	C. B. Goldsmith	188,242	Mar. 13, 1877	289	90	11	425
Brush, Tooth	W. L. Coakley and S. W. Lloyd	189,699	Apr. 17, 1877	702	216	11	666
Brush, Tooth	S. Stevens	189,963	Apr. 24, 1877	987	302	11	712
Brush, Tooth	S. Woolverton	186,287	Jan. 16, 1877	467	144	11	86
Brush, Tube	A. W. Abrams	187,341	Feb. 13, 1877	424	133	11	272
Brush, Wire	J. F. Haskins	188,132	Mar. 6, 1877	164	50	11	402
Brushes, Flexible motor for horse	J. J. Greenough	185,859	Jan. 2, 1877	44	14	11	14
Brushes, Manufacture of	I. S. Hyatt	195,010	Sept. 11, 1877	262	80, 81	12	444
Bucket and lantern, Combined dinner	O. M. Bossert	187,091	Feb. 6, 1877	167	55	11	225
Bucket ear, Well	J. Wasmer	192,549	June 26, 1877	1085	328	11	1148
Bucket, Sap	T. B. Hayward	187,628	Feb. 20, 1877	715	221	11	317
Buckle	D. V. Bradley	192,412	June 26, 1877	952	285	11	1130
Buckle	G. F. Eberhard	186,329	Jan. 16, 1877	524	159	11	92
Buckle	J. Fenton	191,330	May 29, 1877	1256	378	11	944
Buckle	G. R. Kelsey	187,019	Feb. 6, 1877	101	34	11	216
Buckle	B. F. Melton	188,531	Mar. 20, 1877	581	179	11	474
Buckle	C. F. Moore	198,141	Dec. 11, 1877	437	137	12	1018
Buckle	F. W. Schäfer	187,237	Feb. 13, 1877	319	103	11	258
Buckle	F. W. Schafer	189,268	Apr. 3, 1877	235	78	11	590
Buckle	J. Splann	187,677	Feb. 20, 1877	758	235	11	323
Buckle	S. Ward	193,303	July 17, 1877	776	238	12	133
Buckle	H. S. Woodruff	186,968	Feb. 6, 1877	54	19	11	209
Buckle and hook combined	T. L. Wiswell	197,808	Dec. 4, 1877	101	31	12	960
Buckle and snap-hook	F. W. Knapp and C. Schallhorn	194,442	Aug. 21, 1877	687	205	12	339

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Buckle attachment for elastic bands or straps	F. Armstrong	188,330	Mar. 13, 1877	373	117	11	436
Buckle, Belt	W. Roemer	190,906	May 15, 1877	817	241	11	868
Buckle, Composition-covered	O. Wiener	195,682	Sept. 25, 1877	946	283	12	558
Buckle, Harness	E. M. Bradley	194,984	Sept. 11, 1877	239	73	12	441
Buckle, Harness	M. Huerta	186,569	Jan. 23, 1877	769	237	11	137
Buckle, Harness	J. R. Lusby and S. G. Bently	195,141	Sept. 11, 1877	399	120	11	464
Buckle, Harness	A. L. McQuary	195,299	Sept. 18, 1877	574	167	12	496
Buckle, Harness	G. Quackenbush	194,049	Aug. 14, 1877	270	80	12	278
Buckle, Harness	W. F. Van Keuren	197,186	Nov. 13, 1877	474	140	12	857
Buckle, Hat-band	I. H. Francis	187,119	Feb. 6, 1877	193	63	11	229
Buckle, Trace	L. D. Hubbard	188,054	Mar. 6, 1877	96	29	11	393
Buckle, Trace	T. J. Hubbell	188,910	Mar. 27, 1877	968	295	11	535
Buckle, Trace	E. M. Kinne	194,248	Aug. 14, 1877	477	144	12	305
Buckle, Trace	W. B. Walker	191,014	May 22, 1877	947	280	11	893
Buckle, Tug	E. M. Kinne	192,516	June 26, 1877	1053	317	11	1143
Buffing and polishing machine	J. McWilliams	188,930	Mar. 27, 1877	985	302	11	537
Buggy	J. H. Farrell	193,497	July 24, 1877	978	296	12	169
Buggy-spring clip-plate	E. M. Simmons	193,352	July 24, 1877	840	257	12	150
Buggy-top	J. H. and E. M. Keller	192,650	July 3, 1877	100	29	12	26
Buggy-top	C. E. Smith	187,188	Feb. 6, 1877	252	82	11	237
Buggy-top	J. H. Snyder and D. W. Henderson.	194,739	Aug. 28, 1877	969	288	12	388
Bugs from vines, &c., Apparatus for removing and collecting.	A. Scotland and J. M. Simpson	197,903	Dec. 4, 1877	196	59	12	974
Building	A. W. Louth	192,441	June 26, 1877	977	293	11	1134
Building-block	S. Krackowizer and P. Schulze	194,250	Aug. 14, 1877	479	144	12	305
Building-block	M. Nolan	186,604	Jan. 23, 1877	805	249	11	142
Building-block	J. Thompson	193,572	July 24, 1877	1056	316	12	178
Building-elevator	M. Bragaldi	186,455	Jan. 23, 1877	667	204	11	123
Building, Frame	W. R. Morris and J. Slanser	194,836	Sept. 4, 1877	79	26	12	412
Building-ventilator	C. L Garfield	194,770	Sept. 4, 1877	13	4	12	402
Buildings, Fire-proof joint for	C. Marcotte	195,452	Sept. 25, 1877	731	216	12	527
Bulk-head and pier	J. Johnson	192,171	June 19, 1877	675	207	11	1082
Bull-wheel	W. H. H. Morris	195,720	Oct. 2, 1877	31	10	12	565
Bull-wheel and operating mechanism	C. H. and D. C. Brawley	195,697	Oct. 2, 1877	6	2	12	561
Bull-wheel for derricks	W. J. McKee	194,162	Aug. 14, 1877	400	119	12	294
Bullet, Rifle	B. B. Hotchkiss	192,829	July 10, 1877	301	88	12	61
Bundle-handle	J. W. Knapp	196,364	Oct. 23, 1877	723	208	12	687
Bung	E. Gnenther and F. Hoeppner	196,659	Oct. 30, 1877	1028	299	12	741
Bung	F. W. Robertshaw	196,042	Oct. 9, 1877	365	104	12	621
Bung and bung-inserter	W. Kromer	190,224	May 1, 1877	109	32	11	760
Bung and bush combined	E. Rodier	190,905	May 15, 1877	816	241	11	868
Bung, Barrel	E. F. Bonaventure	188,849	Mar. 27, 1877	910	276	11	527
Bung, Barrel	G. H. Phillipi	194,721	Aug. 28, 1877	954	283	12	386
Bung-cutter	R. and G. N. Crichton	191,658	June 5, 1877	139	43	11	995
Bung-cutting machine	J. Franzmann	197,114	Nov. 13, 1877	403	118	12	826
Bung-cutting machine	P. Medart	191,066	May 22, 1877	993	295 296	11	900
Bung-cutting machine	M. H. Wiley	187,951	Feb. 27, 1877	1049	323 324	11	370
Bung-extractor	W. J. Wademan	192,721	July 3, 1877	165	47	12	36
Bung-extractor	W. A. Wiley	196,611	Oct. 30, 1877	977	284	12	734
Bung, Vent	F. Pentlarge and P. Hirsch	192,386	June 26, 1877	929	278	11	1127
Bung, Ventilating	S. H. Lesser	192,702	July 3, 1877	152	43	12	33
Bungs, Venting barrel	A. K. Klein	194,441	Aug. 21, 1877	685	204	12	339
Buoy, Nautical alarm	S. G. Cabell	194,126	Aug. 14, 1877	364	108	12	189
Bureau-drawer	I. Mason	191,162	May 22, 1877	1081	324	11	912
Burglar-alarm	B. N. Bailey	193,210	July 17, 1877	674	205	12	120
Burglar-alarm	B. N. Bailey	196,416	Oct. 23, 1877	766	221	12	693
Burglar-alarm	M. S. Bolt	198,337	Dec. 18, 1877	654	199	12	1056
Burglar-alarm	G. S. Clements	197,334	Nov. 20, 1877	642	190	12	869
Burglar-alarm	W. J. Decker	190,961	May 22, 1877	892	264	11	886
Burglar-alarm	C. C. Dusenbury	196,974	Nov. 13, 1877	255	76	12	804
Burglar-alarm	C. C. Dusenbury	196,975	Nov. 13, 1877	256	76	12	804
Burglar-alarm	I. Hogeland	191,343	May 29, 1877	1266	382	11	946
Burglar-alarm	A. G. Hutchinson and G. F. Ransom.	195,822	Oct. 2, 1877	128	37	12	579
Burglar-alarm	J. Israel	193,002	July 10, 1877	457	138	12	83
Burglar-alarm	J. K. Johnston	192,698	July 3, 1877	149	42	12	33
Burglar alarm	W. H. Knowles, jr	196,023	Oct. 9, 1877	346	98	12	618
Burglar-alarm	F. Krupp	195,934	Oct. 9, 1877	258	72	12	605
Burglar-alarm	J. C. Mackie	193,260	July 17, 1877	730	223	12	127
Burglar-alarm	S. Mangold	197,042	Nov. 13, 1877	324	96	12	815
Burglar-alarm	D. Mersereau	187,034	Feb. 6, 1877	113	38	11	218
Burglar alarm	H. J. D. Miner and D. T. Seeley	191,067	May 22, 1877	994	296	11	900
Burglar-alarm	W. N. Patteson	195,946	Oct. 9, 1877	269	76	12	606
Burglar-alarm	T. Powell	194,173	Aug. 14, 1877	409	123	12	295
Burglar-alarm	E. D. Reichard	198,044	Dec. 11, 1877	339	105	12	1004
Burglar-alarm	W. H. Reiff	194,880	Sept. 4, 1877	122	38	12	417
Burglar-alarm	W. H. Reiff	197,895	Dec. 4, 1877	188	57	12	973
Burglar-alarm	W. J. Smith	189,803	Apr. 17, 1877	808	249	11	680
Burglar-alarm	F. M. Swallow	193,623	July 31, 1877	1126	338	12	199
Burglar-alarm	D. L. Wildrick and W. H. Darling	193,905	Aug. 7, 1877	104	33	12	249
Burglar-alarm	I. B. Woodruff	193,390	July 24, 1877	877	268	12	155
Burglar-alarm	W. D. Wright	187,445	Feb. 13, 1877	530	163	11	285
Burglar-alarm circuit-closer	J. H. Guest	196,445	Oct. 23, 1877	793	229	12	697
Burglar-alarm circuit-closer	W. H. Sawyer	187,674	Feb. 20, 1877	755	234	11	322
Burglar-alarm circuit-closer, Electric	S. S. Applegate	195,074	Sept. 11, 1877	332	100	12	453
Burglar-alarm, Electric	J. Young	198,529	Dec. 25, 1877	856	261	12	1094
Burglar-alarm for safes, Electro-magnetic	C. S. Shivler	197,416	Nov. 20, 1877	720	215	12	882
Burglar-alarm window-fastening	G. Saurbrey	194,376	Aug. 21, 1877	616	185	12	330
Burglar-alarm, Circuit-breaker for electro-magnetic	J. J. Bradley	196,557	Oct. 30, 1877	930	269	12	727
Burglar-alarms, Indicator for electric	A. Bradford	189,993	Apr. 24, 1877	1013	310	11	715

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Burial-case	J. Askins	186,516	Jan. 23, 1877	717	221	11	130
Burial-case	F. Baur and A. Grom	198,531	Dec. 25, 1877	858	261	12	1094
Burial-case	E. Mets	189,247	Apr. 3, 1877	216	73	11	587
Burial-casket	J. Askins	195,556	Sept. 25, 1877	826	245	12	541
Burial-casket	A. Fischer	189,208	Apr. 3, 1877	173	59	11	582
Burial-casket	J. Maxwell	193,014	July 10, 1877	469	142	12	85
Burial-casket	A. H. Nirdlinger	191,995	June 12, 1877	475	146	11	1044
Burial-casket	A. H. Nirdlinger	194,530	Aug. 28, 1877	783	232	12	361
Burial-casket	H. Sander	190,625	May 8, 1877	529	157	11	824
Burial-casket	C. F. Spencer	189,809	Apr. 17, 1877	812	251	11	680
Burial-casket	C. F. Spencer	195,669	Sept. 25, 1877	935	279	12	557
Burner and gas-generator, Hydrocarbon	C. Holland	191,144	May 22, 1877	1066	319	11	910
Burner and lantern	G. A. Beidler	187,085	Feb. 6, 1877	161	53	11	224
Burner, Floating oil	O. Tamagno	195,313	Sept. 18, 1877	586	172	12	498
Burner for heating purposes, Vapor	T. R. Almond	193,796	Aug. 7, 1877	1	1	12	235
Burner, Hydrocarbon	J. Bishop	189,421	Apr. 10, 1877	416	131	11	620
Burner, Hydrocarbon	G. W. Coleman	197,604	Nov. 27, 1877	928	277	12	920
Burner, Hydrocarbon	W. and R. J. Stewart and C. W. Makepiece.	193,048	July 10, 1877	505	152	12	89
Burner, Hydrocarbon vapor	R. W. Park	191,170	May 22, 1877	1089	326	11	913
Burner, Kerosene	E. J. M. Becker	187,803	Feb. 27, 1877	903	289	11	350
Burner, Refuse	W. Glue	191,744	June 5, 1877	217	69	11	1006
Burner, Vapor	M. L. Ballard	186,519	Jan. 23, 1877	720	222	11	130
Burner, Vapor	H. S. Belden	197,202	Nov. 20, 1877	508	150	12	849
Burner, Vapor	J. Benson	186,101	Jan. 9, 1877	288	87	11	55
Burner, Vapor	G. W. Clough	188,283	Mar. 13, 1877	324	102	11	429
Burner, Vapor	J. G. Hobert	188,906	Mar. 27, 1877	963	294	11	534
Burner, Vapor	A. W. Johnson	194,873	Sept. 4, 1877	115	36	12	416
Burner, Vapor	F. A. Lyman	189,242	Apr. 3, 1877	211	71	11	587
Burner, Vapor	J. Musgrave	198,411	Dec. 18, 1877	728	220	12	1067
Burner, Vapor	W. C. North	186,213	Jan. 16, 1877	404	124	11	77
Burner, Vapor	R. W. Park	191,252	May 29, 1877	1186	356	11	935
Burner, Vapor	C. H. Prentiss	194,561	Aug. 28, 1877	810	241	12	366
Burner, Vapor	C. F. Rogers	187,236	Feb. 13, 1877	319	103	11	258
Burner, Vapor	F. A. Sawyer	187,915	Feb. 27, 1877	1018	314	11	365
Burner, Vapor	A. H. Watkins	188,322	Mar. 13, 1877	365	114	11	435
Burner, Vapor	H. Wellingtou	195,240	Sept. 18, 1877	517	151	12	488
Burner, Vapor	H. W. Wilson	190,529	May 8, 1877	430	126	11	810
Burners or carbureters, Oil-reservoir for	V. P. Harris	195,872	Oct. 2, 1877	180	51	12	587
Bustle	T. C. Barclay	188,092	Mar. 6, 1877	125	37	11	397
Butter and fruit jar	C. A. Sands	189,390	Apr. 10, 1877	383	123	11	617
Butter and lard package	J. P. Perkins	196,538	Oct. 30, 1877	911	264	12	724
Butter-box	N. Waterbury	187,945	Feb. 27, 1877	1043	321	11	369
Butter-carrier	W. H. and T. Dulancy	192,420	June 26, 1877	957	287	11	1131
Butter-cutter	J. H. Dugan and G. Moncrief	189,025	Apr. 3, 1877	16	5	11	561
Butter-dish	W. H. Fitch	189,092	Apr. 3, 1877	71	26	11	568
Butter-dish	C. Van Skelline	192,955	July 10, 1877	418	125	12	78
Butter-firkin	A. Pope	193,549	July 24, 1877	1032	310	12	176
Butter for packing, Apparatus for preparing	W. B. Bemis	189,078	Apr. 3, 1877	61	22	11	567
Butter in tubs, Device for cutting	B. F. Eveleth and H. Krueger	185,822	Jan. 2, 1877	8	3	11	10
Butter-mold	A. Alexander, jr	193,103	July 17, 1877	577	174	12	106
Butter-mold	A. W. Faris	196,573	Oct. 30, 1877	945	273	12	729
Butter-mold	S. Giles	191,045	May 22, 1877	975	289	11	897
Butter-mold	F. Hirst	187,275	Feb. 13, 1877	256	113	11	263
Butter-package	J. F. Bly	195,976	Oct. 9, 1877	300	84	12	611
Butter-package	G. Kator	195,931	Oct. 9, 1877	255	71	12	604
Butter-package, Jacketed	E. J. and M. Scofield	188,963	Mar. 27, 1877	1022	314	11	542
Butter-pail	J. Gilberds	189,212	Apr. 3, 1877	178	61	11	583
Butter-pail cover	J. G. Fisher	190,203	May 1, 1877	90	26	11	158
Butter-press	W. S. Alexander	186,224	Jan. 16, 1877	414	127	11	79
Butter, Purifying rancid	R. W. Barnard	198,334	Dec. 18, 1877	651		12	1056
Butter-tub	E. W. Fenton	195,113	Sept. 11, 1877	371	112	12	460
Butter-worker	R. W. Barnard	196,859	Nov. 6, 1877	124	38	12	778
Butter-worker	D. S. Bennett	192,219	June 19, 1877	725	222	11	1089
Butter-worker	H. A. Clow	189,608	Apr. 17, 1877	613	190	11	655
Butter-worker	O. S. Cormish and D. W. Curtis	190,707	May 15, 1877	633	188	11	844
Butter-worker	G. W. Cunningham	194,958	Sept. 11, 1877	213	66	12	437
Butter-worker	D. A. Frick	190,024	Apr. 24, 1877	1057	322	11	720
Butter-worker	W. Johnston	192,372	June 26, 1877	911	274	11	1125
Butter-worker	E. D. and E. W. Kitchen	186,852	Jan. 30, 1877	1057	327	11	184
Butter-worker	G. Ridler	190,692	May 15, 1877	616	183	11	842
Butter-worker	C. A. Sands	190,252	May 1, 1877	135	40	11	764
Button	B. Bailey	189,595	Apr. 17, 1877	602	186	11	653
Button	J. John	194,872	Sept. 4, 1877	114	36	12	416
Button	J. Keats	193,964	Aug. 7, 1877	163	50	12	257
Button	S. W. Shorey	187,325	Feb. 13, 1877	411	129	11	270
Button	G. L. Vose and A. S. Southwick	187,203	Feb. 6, 1877	264	86	11	238
Button	D. Wilcox	186,392	Jan. 16, 1877	594	182	11	101
Button	S. W. Young	192,613	July 3, 1877	59	17	12	20
Button and button-fastening	C. E. Bates	197,959	Dec. 11, 1877	259	80	12	992
Button and stud, Sleeve	A. Goll	190,209	May 1, 1877	97	28	11	759
Button and stud, Sleeve	J. S. Horton	191,344	May 29, 1877	1266	382	11	946
Button and stud, Sleeve	G. Pitts	188,177	Mar. 6, 1877	210	65	11	408
Button, Carriage	A. I. Lenhart	188,157	Mar. 6, 1877	189	58	11	405
Button, Clasp	L. B. Colin	191,657	June 5, 1877	138	43	11	995
Button-eye shank	L. Millaux	194,528	Aug. 28, 1877	782	232	12	361
Button-fastener	G. W. Beeley	189,419	Apr. 10, 1877	414	130	11	660
Button-fastener	M. R. Kenyon	193,611	July 31, 1877	1111	333	12	198
Button-fastening	A. Brookmann	191,649	June 5, 1877	131	41	11	994
Button-fastening	S. A. Hazelton	189,035	Apr. 3, 1877	24	8	11	562
Button-fastening	M. Johnson	194,094	Aug. 14, 1877	314	92	12	284
Button-fastening	F. W. Ludwig	193,976	Aug. 7, 1877	178	51	12	258
Button-fastening	J. J. Mervesp	195,899	Oct. 9, 1877	218	62	12	600
Button-fastening	W. Richardson	197,176	Nov. 13, 1877	463	137	12	835

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Button-fastening	J. C. Teters	188,206	Mar. 6, 1877	245	76	11	412
Button-fastening	C. M. Underwood	198,323	Dec. 18, 1877	641	195	12	1054
Button for carriage-curtains	G. Trinks and A. Pramann	191,492	May 29, 1877	1411	425	11	963
Button-hole cutter	N. A. Soggs	188,976	Mar. 27, 1877	1031	317	11	544
Button-holes, Machine for barring	L. Dustin	194,079	Aug. 14, 1877	297	89	12	281
Button lock and fastener	M. M. Shur	185,976	Jan. 2, 1877	162	50	11	30
Button or stud	H. S. Wing	187,442	Feb. 13, 1877	526	162	11	285
Button, Sleeve	A. L. Frankenthal	196,001	Oct. 9, 1877	324	91	12	614
Button, Sleeve	J. W. and I. M. Miller	190,351	May 1, 1877	232	69	11	777
Button, Sleeve or cuff	C. H. Rose	190,161	May 1, 1877	50	14	11	753
Button, stud, &c., Cuff	F. E. Capron	186,987	Feb. 6, 1877	75	25	11	211
Button-swivel	N. Brooks	196,135	Oct. 16, 1877	480	139	12	644
Button-tab	A. Berndt	188,571	Mar. 20, 1877	614	190	11	479
Buttons, Device for attaching	C. L. Alexander and D. Breed	188,327	Mar. 13, 1877	369	116	11	436
Buttons, Machinery for feeding and attaching	E. A. Sherwood	194,005	Aug. 7, 1877	205	62	12	262
Buttons, Machinery for manufacturing	C. Radcliffe	188,944	Mar. 27, 1877	997	306, 307	11	539
Buttons, Manufacture of	L. Millaux	193,537	July 24, 1877	1020	307	12	174
Buttons, Manufacture of glass	I. Lehman	197,869	Dec. 4, 1877	160	49	12	969
Buttons to cards, Attaching	A. Brear	187,094	Feb. 6, 1877	172	56	11	226
Buttons to cards, Machinery for attaching	C. H. Kellogg	195,715	Oct. 2, 1877	24	7, 8	12	764
Cable-stopper	J. P. Dorr, jr	190,200	May 1, 1877	87	25	11	158
Cake-cutter	H. Erzinger	190,018	Apr. 24, 1877	1049	320	11	720
Cake-cutter	T. J. Fealy	192,244	June 19, 1877	755	231	11	1093
Cake-cutter	C. F. Schell, jr	198,216	Dec. 18, 1877	536	166	12	1039
Cake-machine	D. M. Holmes	188,366	Mar. 13, 1877	409	127	11	441
Cake-turner	J. Kelly	198,245	Dec. 18, 1877	580	175	12	1044
Cakes with cocoa-nut, Device for coating	D. M. Holmes	192,166	June 19, 1877	671	205	11	1082
Calcimining materials, Putting up	J. F. Walter, jr	197,433	Nov. 20, 1877	738	220	12	884
Calendar	A. C. Adams	189,832	Apr. 24, 1877	859	263	11	695
Calendar	H. Gram	187,972	Mar. 6, 1877	16	4	11	383
Calendar	W. W. Kitchen	188,248	Mar. 13, 1877	293	92	11	425
Calendar	E. P. Morse	188,656	Mar. 20, 1877	702	215	11	490
Calendar	F. Ratcliff	186,622	Jan. 23, 1877	823	254	11	144
Calendar	W. E. Waters	196,508	Oct. 23, 1877	866	250	12	706
Calendar and washing-list, Combined	J. C. Coombs	191,517	June 5, 1877	8	2	11	977
Calender-rolls, Frame and brass for	F. Voith	195,859	Oct. 2, 1877	168	47	12	585
Calender-rolls, Machine for grinding	E. E. Latham and R. Binns	193,715	July 31, 1877	1216	365	12	212
Caloric-engine	F. Brown	186,535	Jan. 23, 1877	739	226, 227	11	133
Cam-motion	W. Honghtaling and E. Siviter	189,223	Apr. 3, 1877	189	64	11	584
Camera: *See* Photographic camera. Solar camera.							
Camera-obscuras, Ground-plate attachment for	L. Wright	197,534	Nov. 27, 1877	861	256	12	911
Camp-chest	R. M. Descomtes	192,489	June 26, 1877	1019	308	11	1139
Can: *See* Fluid-can. Fruit or paint can. Meat-can. Meat-preserving can. Metallic can. Milk-can. Oil-can. Packing-can. Paint-can. Paint-mixing can. Sheet-metal can. Shipping-can. Squirt-can. Tin can.							
Can	J. W. Masury	190,347	May 1, 1877	228	68	11	776
Can and box	F. M. Simpson	198,161	Dec. 11, 1877	460	143, 144	12	1022
Can and measure combined	J. Sears	194,112	Aug. 14, 1877	349	104	12	187
Can for transporting liquids	J. Graves	196,083	Oct. 16, 1877	418	121	12	636
Can-jacket	U. B. Campbell	188,855	Mar. 27, 1877	915	278	11	528
Can-opener	J. E. Buckingham	187,596	Feb. 20, 1877	678	211	11	313
Can-opener	L. Cutting	190,560	May 8, 1877	460	136	11	814
Can-opener	D. F. Fetter	191,416	May 29, 1877	1327	403	11	954
Can-opener	J. P. O. Lownsdale	196,915	Nov. 6, 1877	188	55	12	786
Can-opener	J. McWilliams	198,206	Dec. 18, 1877	523	162	12	1037
Can-opener	C. G. Mortimer	185,947	Jan. 2, 1877	137	41	11	26
Can-opener	R. H. Rose	191,075	May 22, 1877	1000	298	11	901
Can or pail top with opener	A. E. Whitehead	188,711	Mar. 20, 1877	750	231	11	497
Can-seaming machine	W. Handy	198,106	Dec. 11, 1877	402	126	12	1013
Can-spout, Flexible	W. R. Rightor	187,561	Feb. 20, 1877	647	201	11	308
Can-top	F. C. Wilson	188,222	Mar. 6, 1877	258	80	11	414
Canal-boat	W. P. Fest	193,402	July 24, 1877	889	271	12	156
Canal-boats, Towing	D. W. Cooke	185,854	Jan. 2, 1877	40	12	11	14
Canal-lock, Automatic	W. L. Marshall	193,885	Aug. 7, 1877	79	25, 26, 27	12	246
Canal-lock, Automatic	W. L. Marshall	194,922	Sept. 4, 1877	164	51	12	423
Canal-lock gate	W. L. Marshall	196,686	Oct. 30, 1877	1051	305	12	743
Candle, Electric	W. E. Sawyer	194,500	Aug. 21, 1877	743	221	12	347
Candle-holder for miners	W. Walker	194,940	Sept. 4, 1877	186	57	12	426
Candles, Branding-stamp for marking	I. Lavenson	193,372	July 24, 1877	861	264	12	153
Candlestick	J. Failing	196,145	Oct. 16, 1877	488	142	12	645
Candlestick	F. R. and A. P. Minard	198,660	Dec. 25, 1877	984	300	12	1113
Candy, Machine for making cable-pipe	O. R. Chase	194,954	Sept. 11, 1877	210	65	12	437
Candy, Machine for making caramel and other	G. S. Collum	186,114	Jan. 9, 1877	299	90	11	57
Candy or sugar, Cough	W. H. Towers	195,464	Sept. 25, 1877	741		12	529
Cane and camp-stool combined	D. B. Reynolds	194,175	Aug. 14, 1877	411	123	12	295
Cane and pipe combined	N. L. Hirsch and W. M. Ettinger	190,859	May 15, 1877	769	229	11	863
Cane and stool combined	W. H. Truesdell	194,484	Aug. 21, 1877	729	217	12	345
Cane and umbrella combined	M. M. Copp	189,084	Apr. 3, 1877	65	24	11	568
Cane and umbrella combined	T. F. Darcy	195,492	Sept. 25, 1877	769	226	12	532
Cane and umbrella combined	A. Mungle	196,592	Oct. 30, 1877	962	279	12	732
Cane-juice, Apparatus for bleaching and elevating	J. Miller	195,522	Sept. 25, 1877	798	236	12	537
Cane-mill	A. G. Munn, C. T. Clark, and T. Brennan.	192,076	June 19, 1877	583	177	11	1070

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Cane, Walking	J. Pool	195,949	Oct. 9, 1877	271	77	12	607
Canister	E. Norton	195,301	Sept. 18, 1877	575	167	12	496
Cap	L. Girbardt	192,253	June 19, 1877	767	233	11	1094
Cap	S. and W. Katz	193,875	Aug. 7, 1877	71	23	12	244
Caps, Manufacture of	W. Kroener	197,478	Nov. 27, 1877	798	238	12	901
Capstan	C. Rogers	190,623	May 8, 1877	527	157	11	823
Capstan and propeller attachment for vessels	W. H. Churchill and W. C. Champlain.	192,738	July 3, 1877	178	52	12	37
Capstan, Reverse power	T. W. Hyde	187,282	Feb. 13, 1877	365	117	11	264
Car and building friction-heater	W. Wells	187,242	Feb. 13, 1877	323	104	11	258
Car awning, Street	F. P. McIntyre	194,923	Sept. 4, 1877	167	52	12	423
Car-axle	E. Danford	195,491	Sept. 25, 1877	768	226	12	532
Car-axle	W. H. Haynes	194,239	Aug. 14, 1877	469	142	12	304
Car-axle	N. Jones	197,375	Nov. 20, 1877	679	203	12	876
Car-axle	W. W. Towson	197,692	Nov. 27, 1877	1011	302	12	932
Car axle	W. Wells	187,688	Feb. 20, 1877	766	238	11	324
Car-axle	W. Winslow	190,175	May 1, 1877	65	18	11	754
Car-axle lubricator	W. Palmer	187,553	Feb. 20, 1877	641	199	11	307
Car axle, Railway	B. T. Babbitt	194,399	Aug. 21, 1877	636	191	12	333
Car, Ballast-distributing	A. B. Dockstader	195,919	Oct. 9, 1877	236	68	12	602
Car bell, Street	C. Keppler	193,876	Aug. 7, 1877	71	23	12	244
Car-brake	J. J. Anthony	196,329	Oct. 23, 1877	679	196	12	680
Car-brake	L. T. Hay	189,457	Apr. 10, 1877	448	141	11	625
Car-brake	R. Jacobi	185,930	Jan. 2, 1877	120	36	11	24
Car-brake	J. Johnson	188,056	Mar. 6, 1877	97	29	11	393
Car-brake	E. S. Jones	191,594	June 5, 1877	76	23	11	987
Car-brake	J. H. Lakin	195,935	Oct. 9, 1877	259	72	12	605
Car-brake	H. C. Laubach, H. Barghausen, and H. T. Ries.	187,718	Feb. 27, 1877	819	255	11	340
Car-brake	S. Levi	187,648	Feb. 20, 1877	735	227	11	320
Car-brake	H. Maey	194,449	Aug. 21, 1877	692	207	12	340
Car-brake	I. R. Oakford	190,689	May 15, 1877	613	182	11	841
Car-brake	L. T. Pyett	195,647	Sept. 25, 1877	913	272	12	554
Car-brake	W. S. Richardson	197,175	Nov. 13, 1877	462	136	12	835
Car-brake	T. L. Seevers and J. Jelfs	196,047	Oct. 9, 1877	369	105	12	621
Car-brake	E. Squire	188,313	Mar. 13, 1877	356	111	11	434
Car-brake	J. Stephenson	190,258	May 1, 1877	139	41	11	764
Car-brake	J. Tarr	192,719	July 3, 1877	164	47	12	35
Car-brake	S. Williams	197,919	Dec. 4, 1877	215	66	12	976
Car brake and starter	W. Marean	190,056	Apr. 24, 1877	1094	333	11	725
Car brake and starter	W. Marean	194,450	Aug. 21, 1877	694	207	12	340
Car brake and starter	A. Winston	193,435	July 24, 1877	918	280	12	161
Car brake, Atmospheric	W. Leughridge	187,024	Feb. 6, 1877	104	35	11	216
Car brake, Street	L. Kimpel and E. Ferckland	186,679	Jan. 30, 1877	881	273	11	161
Car brakes, Chain and belt coupling for railway	E. O. Richard	195,400	Sept. 18, 1877	665	197	12	510
Car-brakes, Steam-muffler for vacuum	J. McGowan	197,522	Nov. 27, 1877	845	252	12	908
Car-bumper	S. M. Cummings	192,570	July 3, 1877	15	4	12	14
Car-bumper	A. W. Weikert	192,039	June 12, 1877	525	161	11	1050
Car bumper, Railway	R. D. Chatterton	191,404	May 29, 1877	1317	399 400	11	953
Car cash-drawer, Street	G. Beadle	197,316	Nov. 20, 1877	619	183	12	866
Car, Combined freight and stock	J. R. Maitland	188,526	Mar. 20, 1877	577	178	11	473
Car-coupling	B. Albertson	187,577	Feb. 20, 1877	663	206	11	310
Car-coupling	A. S. Albright	190,532	May 8, 1877	433	127	11	811
Car-coupling	A. Allen	186,514	Jan. 23, 1877	716	220	11	130
Car-coupling	T. D. Baldwin	193,471	July 24, 1877	952	290	12	166
Car-coupling	W. C. Baskin	197,081	Nov. 13, 1887	368	108	12	821
Car-coupling	L. T. Beaver	196,622	Oct. 30, 1877	985	287	12	735
Car-coupling	A. T. Bigalow	189,334	Apr. 10, 1877	334	107	11	610
Car-coupling	G. Bower	189,689	Apr. 17, 1877	692	213	11	665
Car-coupling	P. Brown	187,096	Feb. 6, 1877	173	56	11	226
Car-coupling	A. Burbee	196,111	Oct. 16, 1877	453	132	12	640
Car-coupling	W. W. Burhans	197,598	Nov. 27, 1877	924	275	12	919
Car-coupling	C. P. Byrd	196,560	Oct. 30, 1877	933	270	12	727
Car-coupling	C. M. Carnahan	190,418	May 8, 1877	321	94	11	796
Car-coupling	J. Chapman	198,349	Dec. 18, 1877	666	203	12	1057
Car-coupling	O. M. Cole	197,458	Nov. 27, 1877	779	232	12	899
Car-coupling	J. C. Cope	187,102	Feb. 6, 1877	178	58	11	227
Car-coupling	M. M. Coppuck and S. L. Wiegand.	187,517	Feb. 20, 1877	612	189	11	303
Car-coupling	O. and M. Crum	186,313	Jan. 16, 1877	494	151	11	90
Car-coupling	W. A. Cummings	194,996	Sept. 11, 1877	250	76	12	442
Car-coupling	G. J. Curry	187,519	Feb. 20, 1877	613	190	11	303
Car-coupling	C. Dobbs and S. L. Robinson	191,122	May 22, 1877	1044	313	11	907
Car-coupling	C. C. Dow	189,710	Apr. 17, 1877	712	220	11	668
Car-coupling	R. H. Dowling and E. S. Perry	192,419	June 26, 1877	956	287	11	1131
Car-coupling	W. Duesler	191,522	June 5, 1877	12	4	11	978
Car-coupling	W. B. Dunning	189,614	Apr. 17, 1877	620	192	11	655
Car-coupling	D. B. Eberly	195,110	Sept. 11, 1877	368	111	12	459
Car-coupling	J. W. Eckman	194,900	Sept. 4, 1877	142	44	12	420
Car-coupling	C. G. Ely	188,241	Mar. 13, 1877	287	90	11	425
Car-coupling	F. H. Fickett	194,514	Aug. 28, 1877	768	228	12	359
Car-coupling	F. Gibford	197,625	Nov. 27, 1877	954	283	12	924
Car-coupling	F. Gibford and L. C. McCormick	190,305	May 1, 1877	190	56	11	771
Car-coupling	G. W. Gomber	188,356	Mar. 13, 1877	396	124	11	440
Car-coupling	R. Greve	194,301	Aug. 21, 1877	542	164	12	320
Car-coupling	H. M. Grever	195,360	Sept. 18, 1877	625	185	12	504
Car-coupling	C. Hall	192,503	June 26, 1877	1037	312	11	1141
Car-coupling	D. R. Halter	191,850	June 12, 1877	334	103	11	1026
Car-coupling	W. Harrison	196,896	Nov. 6, 1877	166	48	12	784
Car-coupling	J. Hayden	189,034	Apr. 3, 1877	23	8	11	562
Car-coupling	F. Heavener	192,915	July 10, 1877	378	112	12	72
Car-coupling	F. Heavener	194,758	Aug. 28, 1877	992	295	12	391

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Car-coupling	M. Heines	190,138	May 1,1877	24	7	11	750
Car-coupling	P. Hien	190,858	May 15,1877	768	228	11	863
Car-coupling	J. A. Hinson	188,516	Mar. 20,1877	569	175	11	472
Car-coupling	J. A. Hinson	197,851	Dec. 4,1877	143	44	12	966
Car-coupling	J. J. Hoffman and C. F. Pommer	188,244	Mar. 13,1877	2[illegible]0	91	11	425
Car-coupling	E. T. Hopkins	187,854	Feb. 27,1877	956	297	11	357
Car-coupling	E. T. Hopkins	187,856	Feb. 27,1877	958	297	11	358
Car-coupling	G. W. Hudson	186,568	Jan. 23,1877	768	237	11	137
Car-coupling	J. Johnston	192,870	July 10,1877	338	100	12	66
Car-coupling	S. N. Keith	191,060	May 22,1877	988	294	11	899
Car-coupling	C. H. Knowlton	186,682	Jan. 30,1877	884	274	11	162
Car-coupling	J. R. Lamb	195,290	Sept. 18,1877	565	165	12	495
Car-coupling	W. Lane	195,025	Sept. 11,1877	280	85	12	446
Car-coupling	G. D. Lease	190,227	May 1,1877	112	32	11	761
Car-coupling	J. Lips	189,634	Aug. 17,1877	637	197	11	658
Car-coupling	G. W. Livick	198,399	Dec. 18,1877	715	217	12	1065
Car-coupling	T. C. Lord	194,779	Sept. 4,1877	25	8	12	404
Car-coupling	J. B. Matcer	196,687	Oct. 30,1877	1053	305	12	744
Car-coupling	M. L. Mathias	189,050	Apr. 3,1877	36	13	11	564
Car-coupling	G. W. Matthews	193,262	July 17,1877	732	223	12	127
Car-coupling	E. B. McCarty	193,531	July 24,1877	1014	305	12	173
Car-coupling	W. W. McCollum	186,591	Jan. 23,1877	794	245	11	140
Car-coupling	G. M. McMahan	192,776	July 3,1877	219	63	12	42
Car-coupling	E. B. Middleton	190,775	May 15,1877	697	206	11	852
Car-coupling	J. C. Mitchell	186,057	Jan. 9,1877	249	75	11	50
Car-coupling	J. B. P. Mohan	188,065	Mar. 6,1877	105	32	11	394
Car-coupling	W. Montfort	197,788	Dec. 4,1877	85	26	12	958
Car-coupling	C. D. Norman	192,710	July 3,1877	157	45	12	34
Car-coupling	T. B. Nutting and D.U. Graveline	197,883	Dec. 4,1877	175	53	12	971
Car-coupling	W. Palmer	187,554	Feb. 20,1877	642	200	11	307
Car-coupling	W. V. Perry	198,147	Dec. 11,1877	443	138	12	1019
Car-coupling	G. T. Peters	194,461	Aug. 21,1877	705	210	12	342
Car-coupling	J. C. Pugh	187,557	Feb. 20,1877	644	200	11	308
Car-coupling	G. W. Putnam	198,680	Dec. 25,1877	1001	304	12	1115
Car-coupling	J. Ramsey, jr.	198,415	Dec. 18,1877	733	221	12	1067
Car-coupling	R. G. Rankin	196,539	Oct. 30,1877	911	264	12	724
Car-coupling	J. Rockwill	193,896	Aug. 7,1877	94	30	12	248
Car-coupling	J. D. Ross	190,984	May 22,1877	917	271	11	889
Car-coupling	B. Rowell	190,375	May 1,1877	255	76	11	780
Car-coupling	F. Roy	194,054	Aug. 14,1877	274	81	12	278
Car-coupling	A. C. Rumble	189,791	Apr. 17,1877	799	245	11	678
Car-coupling	D. W. Shockley	198,695	Dec. 25,1877	1014	309	12	1117
Car-coupling	F. P. Shorey	192,464	June 26,1877	995	299	11	1136
Car-coupling	J. W. Skeele	186,373	Jan. 16,1877	570	173	11	98
Car-coupling	P. E. Sloan	185,839	Jan. 2,1877	25	8	11	12
Car-coupling	D. V. B. Smart	194,792	Sept. 4,1877	38	12	12	405
Car-coupling	N. N. Spafford	196,129	Oct. 16,1877	473	137	12	643
Car-coupling	H. N. Stevenson and H. C. Swan	198,318	Dec. 18,1877	636	194	12	1054
Car-coupling	F. L. Stewart	185,874	Jan. 2,1877	59	18	11	16
Car-coupling	C. W. Stimpson, jr.	195,964	Oct. 9,1877	287	80	12	609
Car-coupling	G. D. Theegarten	196,267	Oct. 16,1877	612	176	12	662
Car-coupling	G. M. Thompson	190,931	May 15,1877	841	249	11	872
Car-coupling	W. J. Trimble	192,544	June 26,1877	1078	325	11	1147
Car-coupling	J. S. Wertz	198,173	Dec. 11,1877	469	147	12	1022
Car-coupling	T. J. West	186,048	Jan. 9,1877	240	72	11	49
Car-coupling	R. J. and R. N. White	188,996	Mar. 27,1877	1048	323	11	546
Car-coupling	G. W. Wilson	191,214	May 22,1877	1135	341	11	919
Car-coupling	J. T. Wilson	194,542	Aug. 28,1877	794	236	12	363
Car-coupling	J. T. Wilson	194,543	Aug. 28,1877	795	237	12	363
Car-coupling	H. Wittmann	186,072	Jan. 9,1877	261	79	11	52
Car-coupling	G. M. Young	197,535	Nov. 27,1877	862	256	12	911
Car-coupling	D. Zeigler	194,946	Sept. 4,1877	190	58	12	426
Car-coupling	J. B. Zink	189,540	Apr. 10,1877	528	165	11	636
Car-coupling, Automatic tubular	J. P. Wood and J. W. Scull	193,679	July 31,1877	1187	355	12	207
Car-door	W. O. Davies	197,343	Nov. 20,1877	651	192	12	871
Car-door	J. Miller and F. C. L. G. Susemihl	198,408	Dec. 18,1877	726	220	12	1066
Car-door	G. L. Waitt	188,994	Mar. 27,1877	1047	322	11	546
Car-door, &c., lock	J. Hill	188,134	Mar. 6,1877	166	51	11	402
Car-door wicket-slide	J. Capron	193,639	July 31,1877	1147	343	12	202
Car-doors, Hasp-lock for	A. H. Palmer and A. D. Barber, jr	197,399	Nov. 20,1877	702	210	12	879
Car doors, Register for freight	W. H. Hoyt	195,284	Sept. 18,1877	560	163	12	494
Car-doors, Seal-bolt for	W. Burtis	188,041	Mar. 6,1877	87	25	11	392
Car draw-bar, Railway	J. B. Baugh	195,971	Oct. 9,1877	294	82	12	610
Car draw-bar, Street	M. Osborn	186,687	Jan. 30,1877	891	275	11	162
Car draw-bar, Street	J. R. Walsh	197,532	Nov. 27,1877	858	255	12	910
Car draw-bars, Manufacture of	J. T. Wilson	195,736	Oct. 2,1877	47	14	12	567
Car driving-gear, Street	G. E. Noyes	192,785	July 3,1877	226	66	12	43
Car, Dumping	H. S. Bower	191,827	June 12,1877	315	97	11	1023
Car, Dumping	T. Purviance	193,281	July 17,1877	753	231	12	130
Car, Dumping	M. Van Wolmer	193,101	July 17,1877	575	173	12	106
Car-dumping apparatus	J. L. Mitchell	188,812	Mar. 27,1877	877	266	11	522
Car engine, Street	F. V. Mathews	194,452	Aug. 21,1877	696	207	12	341
Car-fan, Automatic	J. R. McNeille	187,033	Feb. 6,1877	113	37	11	217
Car, Grain	J. Anderson, jr.	197,307	Nov. 20,1877	609	180	12	864
Car, Hand	G. W. Bemis	193,214	July 17,1877	677	206	12	120
Car hasp, Freight	B. P. Lamason	197,149	Nov. 13,1877	436	128	12	831
Car-heater	L. Capron	190,002	Apr. 24,1877	1033	315	11	717
Car-heater	D. C. Chipman	194,331	Aug. 21,1877	576	172	12	325
Car-heater	G. W. Disman	189,086	Apr. 3,1877	67	24, 25	11	568
Car-heater	U. J. Duffield	194,418	Aug 21,1877	657	197	12	336
Car-heater	E. O. Huntington	191,056	May 22,1877	985	293	11	898
Car-heater	T. Keech	189,743	Apr. 17,1877	750	230	11	672
Car-heater	W. H. Kilbourn	188,802	Mar. 27,1877	863	263	11	520

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Car-heater	J. S. Linsley	186,739	Jan. 30, 1877	936	290	11	169
Car-heater	C. A. West	195,679	Sept. 25, 1877	944	282	12	558
Car-heater	L. T. White	196,961	Nov. 6, 1877	229	68, 69	12	792
Car heater, Railway	J. O. Osborne	186,495	Jan. 23, 1877	700	215	11	127
Car-heating apparatus	J. F. Callaway	195,792	Oct. 2, 1877	97	28	12	575
Car heating apparatus, Railway	W. W. H. Robinson	195,049	Sept. 11, 1877	307	93	12	449
Car lamp-house	J. Stephenson	190,259	May 1, 1877	140	42	11	764
Car, Locomotive street	H. C. Bull	195,881	Oct. 9, 1877	196	56	12	597
Car, Metallic	B. J. La Mothe	198,631	Dec. 25, 1877	955	291	12	1109
Car-mover	W. F. Heshuysen and C. Burn	192,866	July 10, 1877	335	99	12	65
Car-mover	A. Lebus	195,936	Oct. 9, 1877	260	73	12	605
Car-mover	G. W. Leek	194,828	Sept. 4, 1877	73	24	12	411
Car-mover	D. Pierce	192,713	July 3, 1877	159	45	12	35
Car-pedestals, Spring-seat for	G. W. Morris	188,932	Mar. 27, 1877	987	303	11	538
Car-platform, Yielding	R. A. Cowell	193,851	Aug. 7, 1877	50	16	12	241
Car-propeller	I. B. Davis	186,035	Jan. 9, 1877	226	68	11	47
Car-propeller	M. A. Wheaton	192,314	June 19, 1877	836	254	11	1103
Car-propelling apparatus	J. B. Tibbits	192,952	July 10, 1877	414	124	12	77
Car-pusher	J. E. Gearhart	190,848	May 15, 1877	759	225	11	861
Car-pusher	H. La Tourette	189,113	Apr. 3, 1877	90	32	11	571
Car, Railway	I. S. Van Winkle	194,315	Aug. 21, 1877	560	168	12	323
Car, Railway	S. R. and O. V. Wallace	186,387	Jan. 16, 1877	590	181	11	100
Car, Railway box	S. W. Murray	196,926	Nov. 6, 1877	199	58	12	787
Car, Railway ferry	P. P. Shelby	195,957	Oct. 9, 1877	279	79	12	608
Car-replacer	J. B. Barnes	193,211	July 17, 1877	674	205	12	120
Car-replacer	M. Waters	198,326	Dec. 18, 1877	643	196	12	1054
Car-roof	H. Aldridge	186,188	Jan. 16, 1877	383	117	11	75
Car-roof	H. Aldridge	186,189	Jan. 16, 1877	384	117	11	75
Car-roof	H. Aldridge	194,286	Aug. 21, 1877	529	161	12	319
Car-roof	H. Aldridge	198,177	Dec. 18, 1877	491	153	12	1033
Car-roof	E. U. Benedict	195,254	Sept. 18, 1877	532	155	12	491
Car-roof	T. H. Burridge and L. P. Barnes	198,566	Dec. 25, 1877	888	270	12	1099
Car-roof	B. F. Powers and G. E. Needham	198,151	Dec. 11, 1877	448	140	12	1019
Car running-gear	L. T. Pyott	188,672	Mar. 20, 1877	714	219	11	492
Car, Safety	J. Johnson	187,761	Feb. 27, 1877	859	268	11	345
Car, Safety	T. Powers and C. C. Gilman	193,671	July 31, 1877	1180	353	12	206
Car-screen	W. D. May	190,348	May 1, 1877	229	68	11	776
Car-seat	D. H. Heywood	187,465	Feb. 20, 1877	561	173	11	296
Car-seat	C. Houghton	193,659	July 31, 1877	1170	350	12	205
Car-seat	J. L. Mitchell	188,167	Mar. 6, 1877	200	62	11	407
Car, Sleeping	S. S. B. Alexander	194,395	Aug. 21, 1877	632	190	12	332
Car, Sleeping	E. P. Kellogg	194,154	Aug. 14, 1877	392	116, 117	12	293
Car, Sleeping	C. E. Lucas	193,009	July 10, 1877	464	140, 141	12	84
Car-spring	J. Barr	195,330	Sept. 18, 1877	600	177	12	500
Car-spring	W. P. Hansell	190,582	May 8, 1877	481	143	11	817
Car spring	A. Middleton	190,061	Apr. 24, 1877	1100	334	11	726
Car-spring	A. Middleton	191,361	May 29, 1877	1280	386	11	948
Car-spring	J. B. Quirk	190,366	May 1, 1877	245	73	11	778
Car-spring, Spiral	J. Ludlum	192,703	July 3, 1877	153	43	12	34
Car-starter	R. R. Carpenter	187,355	Feb. 13, 1877	440	138	11	274
Car-starter	A. D. Catlin	197,247	Nov. 20, 1877	553	163	12	856
Car-starter	R. Crocker and W. H. Lytle	195,987	Oct. 9, 1877	310	87	12	612
Car-starter	A. J. Curtis	191,839	June 12, 1877	324	100	11	1024
Car-starter	M. V. Drake	187,832	Feb. 27, 1877	933	290	11	354
Car-starter	H. Dutcher	187,111	Feb. 6, 1877	186	61	11	228
Car-starter	E. G. Goddard	187,127	Feb. 6, 1877	199	65	11	230
Car-starter	S. Graham	192,984	July 10, 1877	441	133	12	81
Car-starter	C. A. Harvey	190,853	May 15, 1877	764	227	11	862
Car-starter	C. W. Hermance	191,801	June 12, 1877	284	88, 89	11	1019
Car-starter	R. Hermance	189,458	Apr. 10, 1877	449	141	11	625
Car-starter	W. Jasper	189,227	Apr. 3, 1877	192	65	11	584
Car-starter	J. R. Johns	192,375	June 26, 1877	916	275	11	1125
Car-starter	W. R. Landfear	196,463	Oct. 23, 1877	812	234	12	700
Car-starter	W. H. Lynn	197,280	Nov. 20, 1877	583	173	12	860
Car-starter	J. Mallon	194,159	Aug. 14, 1877	397	118	12	294
Car-starter	J. Marsden	191,355	May 29, 1877	1276	385	11	947
Car-starter	L. Russell	190,909	May 15, 1877	819	242	11	869
Car-starter	H. Schreiner	191,890	June 12, 1877	370	113, 114	11	1030
Car-starter	D. Shoup	190,380	May 1, 1877	262	77	11	780
Car-starter	E. R. Stillman	187,781	Feb. 27, 1877	883	275	11	348
Car-starter	G. M. Thompson	190,930	May 15, 1877	840	249	11	872
Car-starter	J. S. Van Pelt, jr	190,101	Apr. 24, 1877	1142	348	11	731
Car-starter	S. S. Vollum	186,908	Jan. 30, 1877	1108	342	11	191
Car-starter	J. P. Zimmerman	196,282	Oct. 16, 1877	628	181	12	661
Car-starter and motor	C. H. Thompson	193,356	July 24, 1877	844	259	12	151
Car, Steam	H. Merrill	186,146	Jan. 9, 1877	329	100, 101	11	61
Car, Steam street	J. D. Imboden	190,046	Apr. 24, 1877	1082	329, 330	11	724
Car, Steam street	J. Noble	197,881	Dec. 4, 1877	173	52	12	970
Car, Steam street	L. Ransom	187,314	Feb. 13, 1877	399	126	11	368
Car, Stock	C. R. Evans	198,093	Dec. 11, 1877	387	121	12	1011
Car, Street	G. S. Clements	190,402	May 1, 1877	290	85	11	784
Car, Street	D. A. Foster	185,857	Jan. 2, 1877	42	13	11	14
Car, Street	A. A. Young	192,808	July 3, 1877	253	74	12	46
Car, Tank and freight	H. G. Brooks	190,542	May 8, 1877	443	130, 131	11	812
Car tongues, Support for street	B. McDevitt	195,519	Sept. 25, 1877	795	235	12	536
Car train-brake, Railway	J. Raddin	193,178	July 17, 1877	638	193, 194	12	115

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Car-ventilating apparatus	M. A. Morton	193,270	July 17, 1877	742	227	12	128
Car-ventilator	H. E. Finney	193,235	July 17, 1877	705	216	12	123
Car-ventilator	T. Frame	198,290	Dec. 18, 1877	616	186, 187	12	1050
Car-ventilator	P. T. Kester	191,349	May 29, 1877	1270	383	11	946
Car-ventilator	J. Williams	198,441	Dec. 18, 1877	758	229	12	1071
Car ventilator, Railway	S. Darling	189,022	Apr. 3, 1877	12	4	11	560
Car ventilator, Railway	E. Leverich	193,123	July 17, 1877	593	179	12	108
Car-wheel	A. F. Cooper	187,967	Mar. 6, 1877	11	3	11	382
Car-wheel	W. Y. Cruikshank	195,583	Sept. 25, 1877	852	253	12	545
Car-wheel	E. Longstreth	187,978	Mar. 6, 1877	23	6	11	383
Car-wheel	H. Scheibel, jr., G. M. Seeley, and J. Schneider.	198,691	Dec. 25, 1877	1011	308	12	1117
Car-wheel	H. S. Smith	197,675	Nov. 27, 1877	996	298	12	930
Car-wheel	N. Washburn	191,292	May 29, 1877	1226	368	11	940
Car-wheel	N. Washburn	197,304	Nov. 20, 1877	607	179	12	864
Car wheel and axle	G. R. Nebinger	194,499	Aug. 21, 1877	742	221	12	347
Car wheel and axle	I. H. Randall	194,950	Sept. 4, 1877	194	59	12	427
Car wheel and axle	N. Washburn	191,293	May 29, 1877	1227	368	11	940
Car-wheel chill	W. Wilmington	187,441	Feb. 13, 1877	525	162	11	284
Car-wheels, Casting	W. Wilmington	188,714	Mar. 20, 1877	754	232	11	497
Car-wheels, Casting	W. Wilmington	188,715	Mar. 20, 1877	755	232	11	497
Car-wheels, Core for casting	W. H. Paige	186,949	Feb. 6, 1877	35	14	11	207
Car-wheels, Manufacture of	J. K. Sax	186,500	Jan. 23, 1877	704	216	11	128
Car-wheels, Mold for casting	J. K. Sax	197,228	Nov. 20, 1877	533	157	12	853
Car-wheels, Treating and restoring the metal of old	G. W. Swett	194,113	Aug. 14, 1877	350		12	187
Car-window	A. S. Barker and H. J. Shill, jr.	191,095	May 22, 1877	1017	303	11	903
Car-window	G. S. Roberts	192,014	June 12, 1877	496	152	11	1046
Car-window casing	C. H. Shattuck	187,736	Feb. 27, 1877	839	261	11	342
Car window, Street	I. H. Randall	194,930	Sept. 4, 1877	174	54	12	424
Car windows, Ventilator for railway	A. Brandon	186,982	Feb. 6, 1877	71	24	11	211
Cars, &c., Accommodating pulley for cables used in propelling.	O. H. Jadwin	195,509	Sept. 25, 1877	787	232	12	535
Cars and vehicles, Griping device for traction-cables for propelling.	C. A. Gustafson	195,504	Sept. 25, 1877	782	231	12	534
Cars, Device for distributing grain in loading	J. Jackson	195,893	Oct. 9, 1877	213	60	12	599
Cars, Device for lifting and replacing horse	H. O. Baker	188,723	Mar. 27, 1877	773	237	11	509
Cars, Extension-step for	C. W. Perkins	188,665	Mar. 20, 1877	709	217	11	491
Cars, Lavatory for sleeping	C. E. Lucas	191,691	June 5, 1877	170	53	11	999
Cars, Rail-cleaner for	G. and S. Isaacs	196,150	Oct. 16, 1877	492	143	12	646
Cars, Ratchet-releaser for unloading coal	W. D. Beebe	194,760	Sept. 4, 1877	2	1	12	401
Cars, &c., Roof for railway	J. M. Ayer	197,071	Nov. 13, 1877	355	105	12	819
Cars, Stake-holder for platform	O. M. Avery	196,415	Oct. 23, 1877	765	221	12	693
Cars, Steam-motor for city passenger	E. H. Angamar	197,584	Nov. 27, 1877	908	270, 271	12	917
Cars, Steam-pipe coupling for railway	F. King	198,027	Dec. 11, 1877	323	100	12	1002
Cars, Steam plowing and scraping attachment to	S. T. Shankland	189,961	Apr. 24, 1877	984	301	11	711
Cars, Steam plowing and scraping attachment to	S. T. Shankland	196,836	Nov. 6, 1877	98	30	12	775
Cars, &c., Step and turnstile register for	T. Hawkes and T. F. Watson	197,270	Nov. 20, 1877	572	169	12	859
Cars, Ventilating grain	W. S. Sampson	195,456	Sept. 25, 1877	734	217	12	528
Cars, Ventilating railway	H. King	187,390	Feb. 13, 1877	471	147	11	278
Cars, Ventilating steam street	E. Longstreth	195,716	Oct. 2, 1877	29	9	12	564
Cars, Ventilating, warming, and cooling railway	J. S. Linsley	186,012	Jan. 9, 1877	204	62	11	44
Carbon as a motive power, Utilizing bisulphide of	T. M. Fell and H. B. Bunster	191,327	May 29, 1877	1252	377	11	944
Carbureter	D. E. Bangs	193,911	Aug. 7, 1877	109	35	12	250
Carbureter	W. F. Bossert	198,270	Dec. 18, 1877	600	181	12	1048
Carbureter	O. P. Drake	193,232	July 17, 1877	700	214	12	123
Carbureter	E. J. Meredith	196,304	Oct. 23, 1877	662	191	12	678
Carbureter	H. W. Merritt	198,731	Dec. 25, 1877	1055	321	12	1123
Carbureter	J. M. Palmer	189,645	Aug. 17, 1877	644	201	11	659
Carbureter	J. J. Paquette	187,667	Feb. 20, 1877	750	232	11	321
Carbureter	J. J. Paquette	189,490	Apr. 10, 1877	478	151	11	629
Carbureter	J. C. Peacock and C. W. Bradley	185,957	Jan. 2, 1877	146	44	11	27
Carbureter	J. A. Pierce and F. E. Smiley	188,667	Mar. 20, 1877	710	218	11	492
Carbureter	J. Shepard	194,733	Aug. 28, 1877	965	286	12	387
Carbureter	J. Stratton	196,946	Nov. 6, 1877	216	64	12	790
Carbureter, Gas	C. A. Enggren	190,714	May 15, 1877	644	191	11	845
Carbureter, Gas	W. W. L. Kemp	188,919	Mar. 27, 1877	975	299	11	536
Carbureter, Gas and air	O. F. Boomer and H. R. Randall	186,302	Jan. 16, 1877	479	147	11	88
Carbureter, Gas and air	W. H. Winn	191,789	June 12, 1877	271	84	11	1018
Carbureter, Gas and air	W. H. Winn	192,399	June 26, 1877	941	282	11	1128
Carbureters, Automatic feed-regulator for	B. E. Chollar	198,353	Dec. 18, 1877	669	204	12	1058
Carbureters, Float for	J. Clingman	190,419	May 8, 1877	322	94	11	797
Carbureters, Plastic jacket and condenser for	A. W. Porter	198,150	Dec. 11, 1877	446	139	12	1019
Carbureters, Regulated valve for	H. W. Merritt	198,657	Dec. 25, 1877	981	299	12	1112
Carbureting apparatus, Air	K. P. Hangliter	192,825	July 10, 1877	298	87	12	61
Carbureting apparatus, Air	G. W. Lamb	193,007	July 10, 1877	461	139	12	84
Carbureting apparatus, Air	L. Mann	191,767	June 12, 1877	250	79	11	1015
Carbureting apparatus, Air	A. C. Rand	187,415	Feb. 13, 1877	496	154	11	281
Carbureting apparatus, Gas	C. A. Sirié	193,561	July 24, 1877	1046	313	12	177
Carbureting attachment for gas-burners	C. G. Spengler	197,424	Nov. 20, 1877	728	218	12	883
Carbureting-lamp	J. J. and F. G. Palmer	197,944	Dec. 11, 1877	243	75	12	989
Carbureting-machine	C. H. Pierson	193,034	July 10, 1877	489	147	12	87
Card-board for perforating, Finishing	B. Dreyfuss and S. Sachs	190,477	May 8, 1877	384		11	804
Card-board, Illustrated perforated	G. T. Clare	187,704	Feb. 27, 1877	807	250	11	338
Card-board, Ornamental	A. Adams and A. Bott	189,076	Apr. 3, 1877	59	22	11	567
Card-board, Ornamenting	A. Adams and A. Bott	190,997	May 22, 1877	928		11	891
Card-holder	H. J. Herbert and E. R. Wilbur	189,936	Apr. 24, 1877	962	294	11	709
Card-holder	H. H. Snow	187,061	Feb. 6, 1877	138	46	11	221
Card, Playing	C. W. Saladee	198,217	Dec. 18, 1877	534	166	12	1039
Card, Postal	F. W. Brooke	195,974	Oct. 9, 1877	296	83	12	610
Card-rack	F. Hayek	188,051	Mar. 6, 1877	94	28	11	393
Card-rack	J. P. Lamoree	188,519	Mar. 20, 1877	571	176	11	472

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Card-rack	P. G. Toepfer	185,844	Jan. 2, 1877	30	9	11	12
Card, Sample	S. Gutmann	187,847	Feb. 27, 1877	951	295	11	357
Card-screen	S. S. Getchell	192,429	June 26, 1877	964	289	11	1132
Card-teeth, Apparatus for removing	A. A. Brackett	196,133	Oct. 16, 1877	478	139	12	644
Cards for carding fibers, Machine for manufacturing	T. E. and H. Yates and W. H. and S. Kellett.	186,396	Jan. 16, 1877	598	183	11	101
Carding-engine	R. F. Barker	191,395	May 29, 1877	1307	396	11	951
Carding engine, Cotton	G. E. Taft	193,571	July 24, 1877	1055	316	12	178
Carding-engines, Condensing cylinders for	J. Greaves	187,620	Feb. 20, 1877	706	219	11	316
Carding-engines, Mechanism for automatically stopping the feed-roll of.	C. H. Chapman	195,982	Oct. 9, 1877	306	85, 86	12	612
Carding-machine	F. Christen	194,412	Aug. 21, 1877	650	195	12	335
Carding-machine, Alarm	W. A. Hathaway	191,237	May 29, 1877	1174	352	11	933
Carding-machines, Weighing mechanism for	W. C. Bramwell	196,424	Oct. 23, 1877	772	223	12	694
Carding, picking, &c, Clothing for machines for	R. Kitson	187,537	Feb. 20, 1877	627	195	11	306
Carpenters' and cabinet-makers' clamp	W. Heckert	193,951	Aug. 7, 1877	150	46	12	255
Carpenter's clamp, Ship	B. F. Hardesty	197,970	Dec. 11, 1877	274	84	12	993
Carpenter's gage	C. O. Farciot	187,112	Feb. 6, 1877	187	61	11	228
Carpenter's gage	G. W. Vaughan	190,934	May 15, 1877	844	250	11	872
Carpenter's scribing tool	C. E. Billings	194,761	Sept. 4, 1877	3	1	12	401
Carpet bag and satchel, Handle attachment for	A. Kaufmann	193,162	July 17, 1877	625	189	12	113
Carpet-beater	E. Buss	186,076	Jan. 9, 1877	264	80	11	52
Carpet-beater	M. H. Foster	195,357	Sept. 18, 1877	623	185	12	504
Carpet beater and sweeper combined	C. Elsasser	186,550	Jan. 23, 1877	754	231	11	135
Carpet beating and cleaning machine	J. P. Prentiss	198,679	Dec. 25, 1877	1000	304	12	1115
Carpet-cleaner	J. A. Graham	197,265	Nov. 20, 1877	568	168	12	858
Carpet fabric	A. Heald	198,615	Dec. 25, 1877	938	286	12	1106
Carpet-fastener	J. Failing	193,940	Aug. 7, 1877	142	43	12	254
Carpet-fastener	A. Roselio	188,818	Mar. 27, 1877	882	268	11	523
Carpet-lining, &c., Fabric for	D. G. Rollin	194,845	Sept. 4, 1877	88		12	413
Carpet-lining package	J. M. Cobb and H. F. Evans	195,575	Sept. 25, 1877	845	251	12	544
Carpet-stretcher	G. C. Banta	187,345	Feb. 13, 1877	426	134	11	272
Carpet-stretcher	T. H. Brumfield	192,052	June 19, 1877	559	170	11	1067
Carpet-stretcher	W. M. Galusha	188,790	Mar. 27, 1877	850	258	11	518
Carpet-stretcher	W. H. Maybach	187,544	Feb. 20, 1877	633	197	11	306
Carpet-stretcher	G. Prichard and J. Kienardt	187,046	Feb. 6, 1877	126	41	11	219
Carpet-stretcher	L. W. Rivers	192,599	July 3, 1877	43	13	12	18
Carpet-stretcher	A. T. Safford	190,985	May 22, 1877	918	271	11	889
Carpet-stretcher	J. D. Sloan	187,185	Feb. 6, 1877	249	82	11	236
Carpet-sweeper	E. K. Breckenridge	186,456	Jan. 23, 1877	668	205	11	123
Carpet-sweeper	E. F. Downer and G. Kampf	196,201	Oct. 16, 1877	541	157	12	653
Carpet-sweeper	H. A. Gore and G. W. Edgcomb	187,618	Feb. 20, 1877	705	218	11	316
Carpet-sweeper	W. S. Hall	187,374	Feb. 13, 1877	455	143	11	276
Carpet-sweeper	B. W. Johnson	194,095	Aug. 14, 1877	314	93	12	284
Carpet-sweeper	G. W. D. Medbury	185,865	Jan. 2, 1877	50	15	11	15
Carpet-sweeper	H. F. Noyes	187,166	Feb. 6, 1877	234	76	11	234
Carpet-sweeper	E. T. Prindle	190,982	May 22, 1877	914	270, 271	11	889
Carpet-sweeper	A. W. Stewart	186,894	Jan. 30, 1877	1094	338	11	189
Carpet-sweeper	A. W. Stewart	186,895	Jan. 30, 1877	1094	339	11	189
Carpets, &c., Multiplying show-case for exhibiting	C. W. Armstrong and R. A. Tyrrel	196,067	Oct. 16, 1877	399	115	12	633
Carriage	W. H. Hancock	194,870	Sept. 4, 1877	113	35	12	416
Carriage	J. W. Post	186,615	Jan. 23, 1877	816	252, 253	11	143
Carriage and other doors, Handle for	G. W. Beers	195,694	Oct. 2, 1877	3	1	12	561
Carriage-axle	S. A. Bemis	187,585	Feb. 20, 1877	670	208	11	311
Carriage-axles, Machine for turning	T. Coulter and H. McKenzie	197,999	Dec. 11, 1877	299	92	12	998
Carriage-body adjuster	I. Wilkins, jr	191,909	June 12, 1877	386	120	11	1032
Carriage, Child's	C. H. Bush	193,919	Aug. 7, 1877	117	37	12	251
Carriage, Child's	J. F. Downing	196,973	Nov. 13, 1877	254	75	12	804
Carriage, Child's	J. Jenkinson	188,800	Mar. 27, 1877	860	262	11	520
Carriage, Child's	C. G. Macht	193,980	Aug. 7, 1877	182	55	12	259
Carriage-clip	G. F. Smith	186,502	Jan. 23, 1877	706	217	11	128
Carriage-curtain	D. W. Copeland	198,573	Dec. 25, 1877	893	272	12	1100
Carriage-curtain fastener	H. P. Elston	192,748	July 3, 1877	188	54	12	38
Carriage-curtain fastener	W. B. Gould	195,499	Sept. 25, 1877	777	228	12	533
Carriage-curtain fastener	J. S. Kuder	192,267	June 19, 1877	781	237	11	1096
Carriage-dash frame	W. T. Cooley	196,970	Nov. 13, 1877	252	75	12	804
Carriage-door latch	F. P. Pfleghar	193,723	July 31, 1877	1222	367	12	212
Carriage-door lock	J. D. Good	197,215	Nov. 20, 1877	521	154	12	851
Carriage, Falling-front	P. C. Durham	186,995	Feb. 6, 1877	81	27	11	212
Carriage foot-rest	M. Seward	197,983	Dec. 11, 1877	284	87	12	995
Carriage-jack	C. Duecker	191,410	May 29, 1877	1323	401	11	953
Carriage-jack	A. J. Tschantz	186,696	Jan. 30, 1877	899	278	11	164
Carriage, Jump-seat	G. J. and C. L. Tucker	193,677	July 31, 1877	1185	355	12	207
Carriage-lantern	F. Park	195,945	Oct. 9, 1877	268	76	12	606
Carriage-light frame	F. A. Neider	186,946	Feb. 6, 1877	33	13	11	206
Carriage-perch stay	J. R. McGuire	191,700	June 5, 1877	178	56	11	1000
Carriage-roof	T. Winans	188,325	Mar. 13, 1877	367	115	11	436
Carriage running-gear	S. Gibson	193,444	July 24, 1877	927	282	12	162
Carriage-seat lock	N. Hayward and P. C. Hays	189,215	Apr. 3, 1877	180	62	11	583
Carriage-seat, Turn-over	C. W. Patten	187,304	Feb. 13, 1877	389	123	11	367
Carriage-slat iron	W. B. Doolittle	194,660	Aug. 28, 1877	895	267	12	378
Carriage-spring	J. T. Pickhaver	196,382	Oct. 23, 1877	740	213	12	689
Carriage-spring	H. Timken	197,689	Nov. 27, 1877	1009	301	12	932
Carriage-spring	A. Woeber	198,259	Dec. 18, 1877	591	179	12	1046
Carriage-step	G. A. Keene	195,020	Sept. 11, 1877	275	84	12	445
Carriage-top	W. A. Benedict	195,083	Sept. 11, 1877	341	103	12	455
Carriage-top	G. F. Canniff, sr	190,549	May 8, 1877	450	133	11	813
Carriage-top	P. Copland	195,986	Oct. 9, 1877	309	87	12	612
Carriage-top	J. V. Emmitt	198,194	Dec. 18, 1877	512	158	12	1045
Carriage-top	C. Fockler	191,129	May 22, 1877	1050	315	11	907
Carriage-top	W. E. Tallman	186,047	Jan. 9, 1877	239	72	11	49

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Carriage-top	J. N. Whipple	194,752	Aug. 28, 1877	988	293	12	390
Carriage-top and shifting seat-rail	J. W. Post	189,385	Apr. 10, 1877	376	121	11	616
Carriage-top brace	J. F. Croft and H. B. Pitner	188,235	Mar. 13, 1877	282	88	11	424
Carriage-top iron	C. J. Brackebush	198,184	Dec. 18, 1877	498	155	12	1033
Carriage-top iron	H. K. Porter	196,477	Oct. 23, 1877	829	239	12	701
Carriage-top joint	J. E. Reeves	197,666	Nov. 27, 1877	989	295	12	929
Carriage-top, Landau	R. Dunn	192,115	June 19, 1877	618	188	11	1075
Carriage-top loop	F. A. Neider	195,637	Sept. 25, 1877	905	269	12	552
Carriage-top prop	J. Ives	186,039	Jan. 9, 1877	231	69	11	47
Carriage-top prop	L. Sawyer	196,390	Oct. 23, 1877	747	215	12	690
Carriage-top, Removable	J. B. Ashelman	191,822	June 12, 1877	309	95	11	1022
Carriage-top support	A. Goodyear	186,555	Jan. 23, 1877	758	232	11	135
Carriage-wheel axle	J. Smith	197,421	Nov. 20, 1877	725	216	12	883
Carriage, Wheel-plow	A. K. Wolfe	186,780	Jan. 30, 1877	975	303	11	175
Carriage-wrench	E. K. Holley	191,761	June 12, 1877	243	77	11	1014
Carriages, Blank for shifting rails of	E. D. Clapp and F. Van Patten	194,292	Aug. 21, 1877	536	162	12	320
Carriages, Blank for shifting rails of	E. D. Clapp and F. Van Patten	194,293	Aug. 21, 1877	536	162	12	320
Carriages, Canopy-top for children's	C. E. Fosburgh	191,233	May 29, 1877	1171	351	11	933
Carrier:							
See Barrel-carrier.							
Book-carrier.							
Butter-carrier.							
Egg-carrier.							
Lathe-work carrier							
Log-carrier.							
Slate and book carrier.							
Trace-carrier.							
Tug-carrier.							
Type carrier.							
Cart for heating and conveying plastic composition	A. Dietz	198,359	Dec. 18, 1877	676	206	12	1059
Cartridge	B. L. Budd	190,190	May 1, 1877	79	22	11	157
Cartridge	H Buffington	186,460	Jan. 23, 1877	673	206	11	124
Cartridge	I. Davis	193,855	Aug. 7, 1877	54	17	12	242
Cartridge	E. Peirce and S. Eggers	185,835	Jan. 2, 1877	21	7	11	11
Cartridge	A. B. Smith	189,069	Apr. 3, 1877	54	20	11	566
Cartridge	J. P. White	186,220	Jan. 16, 1877	410	126	11	78
Cartridge-base former	G. P. Salisbury and C. L. Hunt	190,080	Apr. 24, 1877	1120	340	11	723
Cartridge-belt	W. W. Rogers	197,946	Dec. 11, 1877	245	76	12	990
Cartridge, Blasting	P. Castellanos	193,483	July 24, 1877	963	292	12	167
Cartridge, Blasting	P. Castellanos	193,484	July 24, 1877	963		12	167
Cartridge, Blasting	A. C. Rand	196,767	Nov. 6, 1877	28	9	12	765
Cartridge capping and uncapping implement	G. L. Bailey	186,406	Jan. 23, 1877	619	189	11	117
Cartridge capping and uncapping implement	C. Eutebrouk	193,150	July 17, 1877	613	186	12	111
Cartridge, Fire-arm	B. B. Hotchkiss	193,658	July 31, 1877	1169	350	12	205
Cartridge-loading implement	J. H. Dudley	188,872	Mar. 27, 1877	933	284	11	530
Cartridge-loading implement	J. H. Dudley	196,439	Oct. 23, 1877	787	227	12	696
Cartridge-loading implement	W. S. Smoot and H. H. Hamilton	196,545	Oct. 30, 1877	917	266	12	725
Cartridge, Metallic	J. H. Bullard	192,676	July 3, 1877	131	36	12	30
Cartridge, Metallic	J. H. Gill	190,208	May 1, 1877	95	27	11	758
Cartridge, Metallic	B. B. Hotchkiss	191,430	May 29, 1877	1343	407	11	956
Cartridge, Metallic	T. T. S. Laidley	193,612	July 31, 1877	1111	334	12	198
Cartridge-primer	J. Lee	193,524	July 24, 1877	1008	304	12	173
Cartridge-shell	I. Kinney	191,243	May 29, 1877	1179	354	11	934
Cartridge-shell, Metallic	J. H. Bullard	197,823	Dec. 4, 1877	116	36	12	962
Cartridge-shells, Implement for extracting	W. G. Rawbone	197,291	Nov. 20, 1877	594	176	12	862
Cartridge-shells, Machine for varnishing the interior of	F. A. Pratt and J. R. Reynolds	189,057	Apr. 3, 1877	43	15, 16	11	565
Cartridge, Shot	H. H. Barnard	189,417	Apr. 10, 1877	411	130	11	620
Cartridge, Shot	J. P. White	186,391	Jan. 16, 1877	593	182	11	101
Cartridge, Signal	H. H. Coston	197,339	Nov. 20, 1877	646	191	12	870
Cartridge, Signal	E. W. Very	190,263	May 1, 1877	146	43	11	765
Cartridge-weighing machine	J. H. Gill	185,858	Jan. 2, 1877	43	13, 14	11	14
Cartridges, measuring device for filling	J. D. Wilkinson	193,434	July 24, 1877	917	279	12	161
Case:							
See Advertising-case.							
Book-case.							
Blanket-case.							
Burial-case.							
Chamber-case.							
Clock-case.							
Clock and calendar case.							
Demijohn-case.							
Gun-cleaning case.							
Lock-case.							
Medicine-case.							
Organ-case.							
Packing-case.							
Padlock-case.							
Paper-case.							
Papetrie and writing case.							
Pen and pencil case.							
Razor-strop case.							
Refrigerating transportation case.							
Show-case.							
Spool-case.							
Syringe-case.							
Ticket-case.							
Toilet-case.							
Toy cigar-case.							
Type-case.							
Watch-case.							
Castanet	W. Hutchings	192,099	July 10, 1877	455	137	12	83
Caster	J. L. Bond	186,534	Jan. 23, 1877	738	226	11	133
Caster attachment	L. B. Barker	198,181	Dec. 18, 1877	496	154	12	1033
Caster, Furniture	S. E. Bauder	193,472	July 24, 1877	953	290	12	166
Caster, Furniture	C. Brinton	198,186	Dec. 18, 1877	502	155	12	1034
Caster, Furniture	E. Hoffstaetter	196,017	Oct. 9, 1877	338	96	12	617
Caster, Furniture	C. Horn	195,282	Sept. 18, 1877	559	163	12	494
Caster, Furniture	S. Konz	190,034	Oct. 9, 1877	347	98	12	618
Caster, Furniture	A. C. Martin	190,152	May 1, 1877	42	12	11	152
Caster, Furniture	S. Myers	195,768	Oct. 2, 1877	74	22	12	571
Caster, Sewing-machine	G. K. Proctor	192,877	July 10, 1877	347	102	12	67
Caster, Stove-leg	A. Mey	189,897	Apr. 24, 1877	927	282	11	703
Caster, Trunk	W. B. Gould	196,657	Oct. 30, 1877	1027	298	12	741
Casting brass, &c	J. R. Cooper	192,114	June 19, 1877	617	188	11	1075
Casting, Case-hardening malleable iron	A. F. Andrews	191,089	May 22, 1877	1013		11	903
Casting composition, Pattern for metallic	J. Habermehl	189,729	Apr. 17, 1877	734		11	670
Casting-flask	H. H. Fisher	185,904	Jan. 2, 1877	89	27	11	29
Casting metal articles, Sand-molding apparatus for	A. K. Rider	195,843	Oct. 2, 1877	147	42	12	582
Casting metals Apparatus for	C. and B. H. Dusenbury	189,090	Apr. 3, 1877	70	26	11	568
Casting ornamental figures, Composition for	A. Kiesele	190,769	May 15, 1877	694		11	852

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Casting steel, Mold for	A. J. Nellis	196,307	Oct. 23, 1877	666	192	12	679
Castings, and protecting the surface of the same, Ornamenting.	M. A. Richardson	187,559	Feb. 20, 1877	646		11	308
Castings, Annealing	J. S. Robinson	188,189	Mar. 6, 1877	226	71	11	410
Castings, Molding sand for making	W. Aikin and W. W. Drummond	195,071	Sept. 11, 1877	327	99	12	453
Castings, Sand-molding machine for metal	W. Aikin and W. W. Drummond	195,070	Sept. 11, 1877	325	98	12	453
Cattle-watering device	W. H. Hayes	195,274	Sept. 18, 1877	551	160	12	493
Cauterizing apparatus	C. A. Paquelin	187,301	Feb. 13, 1877	384	122	11	266
Ceiling, Fire-proof	J. Gilbert	191,135	May 22, 1877	1059	316	11	909
Ceiling, Metal-clad	W. E. Worthen	192,400	June 26, 1877	942	282	11	1129
Cellar-bottoms, Vent for gases under	T. New	196,376	Oct. 23, 1877	734	211	12	688
Cement, Composition for making hydraulic	C. F. Dunderdale	195,749	Oct. 2, 1877	58		12	569
Cement, Hydraulic	J. C. Gostling	194,143	Aug. 14, 1877	381	113	12	291
Cement, Steam-joint	S. Otley	191,249	May 29, 1877	1184		11	934
Center-board for vessels	S. R. Babbidge	195,741	Oct. 2, 1877	51	16	12	568
Center-board for vessels	W. W. Palmer	193,829	Aug. 7, 1877	32	10	12	238
Centrifugal drying and cleaning machine	J. Buchanan, jr.	189,185	Apr. 3, 1877	150	53	11	579
Centrifugal machine	W. Cairn	198,346	Dec. 18, 1877	663	202	12	1057
Centrifugal machine	A. A. Goubert	191,137	May 22, 1877	1060	317	11	909
Chain-coupling	J. C. Dillon	192,639	July 3, 1877	87	26	12	24
Chain, Drive	W. D. Ewart	196,115	Oct. 16, 1877	456	133	12	641
Chain, Drive	J. F. Kingwill	190,147	May 1, 1877	35	10	11	151
Chain elevator, Endless	J. A. Woodward	191,911	June 12, 1877	388	120, 121	11	1033
Chair for public places	G. S. De Bonald	194,135	Aug. 14, 1877	374	111	12	290
Chain-link	W. D. Ewart	188,114	Mar. 6, 1877	146	44	11	400
Chain-link, Drive	W. D. Ewart	188,113	Mar. 6, 1877	145	43	11	400
Chain-link, Drive	W. D. Ewart	188,115	Mar. 6, 1877	147	44	11	400
Chain-link, Drive	W. D. Ewart	188,116	Mar. 6, 1877	147	44	11	400
Chain-link, Drive	W. D. Ewart	188,117	Mar. 6, 1877	148	44	11	400
Chain-link, Drive	B. B. Tuttle	188,209	Mar. 6, 1877	247	77	11	412
Chain-link, Ornamental	J. J. Freeman	189,619	Apr. 17, 1877	625	193	11	656
Chain-link, Ornamental	L. Heckmann	198,109	Dec. 11, 1877	405	127	12	1013
Chain-link, Ornamental	J. L. Heeley	197,364	Nov. 20, 1877	668	200	12	874
Chain-link, Ornamental	E. Nortemann	193,543	July 24, 1877	1027	309	12	175
Chain-link, Ornamental	E. F. Seery	189,797	Apr. 17, 1877	804	247	11	679
Chain-links, Machine for forming	J. Schinneller and L. Fitzpatrick	198,417	Dec. 18, 1877	734	222	12	1068
Chain-links, Machine for making	J. Schinneller and L. Fitzpatrick	194,181	Aug. 14, 1877	416	125	12	296
Chain-machine	L. M. Rumsey	198,690	Dec. 25, 1877	1010	307	12	1116
Chain-making machine	G. B. Whitney	197,191	Nov. 13, 1877	478	141, 142	12	837
Chain, Ornamental	D. D. Nevins	197,655	Nov. 27, 1877	981	292	12	928
Chain, Ornamental	H. Wexel	190,105	Apr. 24, 1877	1149	349	11	732
Chair: *See* Barber's chair. Barber's and dentist's chair. Convertible chair. Dental chair. Easy-chair. Extension-chair. Folding chair. Invalid-chair. Nursery-chair. Opera-chair. Oscillating-chair. Railway-chair. Reclining-chair. Revolving chair. Rocking-chair. Step-ladder chair. Student's chair. Tilting chair.							
Chair	F. H. Foster	190,842	May 15, 1877	754	223	11	861
Chair	J. Hess	190,967	May 22, 1877	898	266	11	887
Chair	H. Heywood	198,386	Dec. 18, 1877	704	214	12	1063
Chair	P. Kamerer	187,389	Feb. 13, 1877	470	147	11	278
Chair	F. L. Patch	186,870	Jan. 30, 1877	1076	332	11	186
Chair	J. H. Rodebaugh	195,454	Sept. 25, 1877	733	216	12	527
Chair	M. Schrenkeisen	197,567	Nov. 27, 1877	893	266	12	915
Chair	E. J. Smith	198,421	Dec. 18, 1877	738	223	12	1068
Chair	T. Testevin	190,388	May 1, 1877	274	80	11	781
Chair	T. Testevin	192,850	July 10, 1877	321	94, 95	12	64
Chair	H. Wakeman	194,389	Aug. 21, 1877	626	189	12	332
Chair and carriage combined	J. F. Downing	188,344	Mar. 13, 1877	384	120	11	438
Chair and cradle combined	A. Goldschmidt	188,889	Mar. 27, 1877	947	289	11	532
Chair and settee	J. A. S. Simonson	193,731	July 31, 1877	1229	369	12	214
Chair and work-table combined	G. L. Rich	189,141	Apr. 3, 1877	111	40	11	574
Chair back and seat	H. C. Knowlton	190,872	May 15, 1877	783	232	11	864
Chair-bottoms, Machine for cutting and perforating veneers for.	O. N. Eaton	195,921	Oct. 9, 1877	238	68	12	603
Chair-brace	J. W. Collins	191,835	June 12, 1877	321	99	11	1024
Chair-commode	W. H. Bricker	187,701	Feb. 27, 1877	803	249	11	338
Chair foot-rest	J. Vose	196,506	Oct. 23, 1877	865	249	12	706
Chair-legs, Attaching	E. B. Witherell	195,867	Oct. 2, 1877	175	50	12	586
Chair-seat	S. M. Barrett	186,973	Feb. 6, 1877	57	20	11	209
Chair-seat	J. Lemman	189,757	Apr. 17, 1877	766	235	11	674
Chair-seat	J. Lemman	189,758	Apr. 17, 1877	767	235	11	674
Chair-seat	J. N. Provenzano and S. De Gaetano.	190,158	May 1, 1877	48	13	11	153
Chair seat and back	P. Rath	188,410	Mar. 13, 1877	453	141	11	448
Chair seat and back	P. Rath	196,824	Nov. 6, 1877	85	26	12	773
Chair seat and back	H. Wakeman	192,203	June 19, 1877	707	217	11	1087
Chair-seats, Material for	J. N. Provenzano and S. De Gaetano.	195,951	Oct. 9, 1877	274	77	12	607
Chairs, Folding foot-rest for	M. Brennan	186,000	Jan. 9, 1877	193	59	11	43
Chairs, lounges, and car-seats, Reversible seat and back for.	H. Wakeman	188,445	Mar. 13, 1877	491	152	11	452, 453
Chamber-case	G. Vorrath	189,818	Apr. 17, 1877	820	253	11	681
Chamber-closet	E. Smith	189,802	Apr. 17, 1877	807	249	11	680
Chamber-vessel	J. C. Moore	186,264	Jan. 16, 1877	448	137	11	83
Chandelier	J. H. Hobbs	186,087	Jan. 9, 1877	273	82	11	53

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Chandelier	F. S. Shirley	189,509	Apr. 10, 1877	495	156	11	631
Chandelier, Adjustable	R. Marsh	191,064	May 22, 1877	992	295	11	899
Chandelier, Extension	J. F. Brown	196,872	Nov. 6, 1877	143	43	12	780
Chandelier, Extension	J. T. Bruen	191,399	May 29, 1877	1311	398	11	952
Chandelier, Extension	J. W. Carter	196,430	Oct. 23, 1877	778	225	12	695
Chandelier, Lamp-supporting	C. G. Dyott	194,420	Aug. 21, 1877	660	198	12	336
Chandelier-slide	C. Y. Taylor and J. T. Bruen	192,030	June 12, 1877	511	156	11	1049
Chandeliers, Drop-light attachment for	J. A. Evarts	186,332	Jan. 16, 1877	527	160	11	93
Chandeliers, Extension device for	J. Roberts	187,673	Feb. 20, 1877	754	234	11	322
Chandeliers, Friction-clutch for gas	J. H. Seaman	189,580	Apr. 17, 1877	587	182	11	652
Chandeliers, Suspension-hook for	G. W. Woodward	193,585	July 24, 1877	1068	320	12	180
Change-box	O. White	190,942	May 15, 1877	854	253	11	873
Change-gate	W. A. Dutton	188,730	Mar. 27, 1877	780	240	11	510
Channeling-machine	G. W. Bacon	195,250	Sept. 18, 1877	530	154	12	490
Charcoal finery furnace	C. H. Morgan	187,164	Feb. 6, 1877	232	76	11	234
Charm, Perfumed	C. A. Atkinson	195,324	Sept. 18, 1877	595	175	12	500
Chart, Dress	M. Harrison	188,896	Mar. 27, 1877	954	291	11	533
Chart, School	C. Corning	195,348	Sept. 18, 1877	616	182	12	503
Check, &c., Bank	F. W. Brooks	193,221	July 17, 1877	684	208	12	121
Check, Bank	T. G. Hillhouse	198,513	Dec. 25, 1877	843	256	12	1092
Check-rein hook	W. Liddell	186,091	Jan. 9, 1877	277	83	11	54
Check-register	A. Stewart and L. Von Hoven	190,988	May 22, 1877	921	272	11	890
Check-row and drill-planter combined	J. F. Champlin	196,072	Oct. 16, 1877	406	118	12	634
Check-row cords, Pulley for	G. D. Haworth	197,550	Nov. 27, 1877	877	261	12	913
Check-rower	W. Flaherty	188,615	Mar. 20, 1877	653	202	11	484
Check-rower	C. M. Hoghton	197,633	Nov. 27, 1877	962	286	12	925
Check-rower	J. Johnson	198,116	Dec. 11, 1877	411	128	12	1014
Check-rower	M. Newton	196,537	Oct. 30, 1877	910	263 264	12	724
Check-rower and corn-drill	S. De Veaux and J. Rosser	191,003	May 22, 1877	934	276	11	891
Check-rower and dropper	S. H. Worth	190,110	Apr. 24, 1877	1153	351	11	733
Cheese-box hoops, Making	C. T. Fairchild	186,002	Jan. 9, 1877	194	59	11	43
Cheese-cutter	A. Beausoleil	191,396	May 29, 1877	1308	397	11	951
Cheese-former for cider-presses	J. Clark	187,100	Feb. 6, 1877	176	57	11	227
Cheese-making	L. B. Arnold	187,798	Feb. 27, 1877	900		11	350
Cheese-making	L. B Arnold	188,226	Mar. 13, 1877	276		11	423
Cheese-manufacture	C. Baltz, J. and S. W. Prindle	192,963	July 10, 1877	425		12	79
Cheese-press	W. H. Ahrens	196,176	Oct. 16, 1877	517	150	12	649
Cheese-vat	N. M. Wells, jr	198,172	Dec. 11, 1877	468	147	12	1022
Chest: *See* Camp-chest. Flour-chest.							
Chest-protecting garment	C. A. Fuller	192,366	June 26, 1877	907	272	11	1124
Chewing-gum, Preparation of	R. Cotter	195,579	Sept. 25, 1877	848		12	544
Chill-mold for wheels	G. McArthur	197,282	Nov. 20, 1877	584	173	12	861
Chimney	P. Mihan	195,382	Sept. 18, 1877	648	192	12	507
Chimney attachment for heaters	A. Young	196,281	Oct. 16, 1877	627	181	12	664
Chimney-cap	G. Chase	198,350	Dec. 18, 1877	666	203	12	1058
Chimney-cap	E. Hawkes	195,601	Sept. 25, 1877	870	259	12	547
Chimney-cap	F. Lichtenfels	197,150	Nov. 13, 1877	437	129	12	831
Chimney-cap	W. L. Williams	196,409	Oct. 23, 1877	761	220	12	693
Chimney-cap ventilator	P. Mihan	194,781	Sept. 4, 1877	29	9	12	404
Chimney-cleaner	S. H. Dickerson	195,445	Sept. 25, 1877	721	213	12	526
Chimney-cowl	A. F. Barry and I. G. Lane	191,297	May 29, 1877	1230	369	11	940
Chimney, Sectional	J. Browell	193,687	July 31, 1877	1194	357	12	208
Chimney, Sectional	L. E. Clawson	197,096	Nov. 13, 1877	387	114	12	823
Chimney, Sectional	I. D. Peck	196,698	Oct. 30, 1877	1063	309	12	746
Chimney-top	L. K. Dutton	191,229	May 29, 1877	1166	350	11	932
Chimney-top	T. B. Entwisle	191,230	May 29, 1877	1167	350	11	932
Chimney-top	G. Lemmle	188,156	Mar. 6, 1877	189	58	11	405
Chimney-top	W. Quayle	195,399	Sept. 18, 1877	664	197	12	510
Chimney-top	J. Sutton	192,308	June 19, 1877	829	252	11	1102
Chimney-top	J. J. Van Wie	192,202	June 19, 1877	706	216 217	11	1087
Chimney-ventilator	J. Drake	190,294	May 1, 1877	179	54	11	769
Chimney, &c., ventilator	M. C. Hull	197,033	Nov. 13, 1877	314	93	12	813
Chimney-ventilator	A. Van Horn	188,989	Mar. 27, 1877	1043	321	11	545
Chimneys from smoking, Device for preventing	J. R. Bowers	188,497	Mar. 20, 1877	549	169	11	469
Chin-adjuster	T. Boylston	197,243	Nov. 20, 1877	549	162	12	855
Chisel, Mortise	E. Carney	192,323	June 26, 1877	865	261	11	1119
Chisel, Mortising	J. T. Bowen	191,643	June 5, 1877	125	39	11	993
Chisel, Mortising	G. Buttler	192,148	June 19, 1877	654	200	11	1079
Chisel Mortising	J. S. Russell	194,180	Aug. 14, 1877	415	125	12	296
Chronometer-regulator	G. Newton	194,105	Aug. 14, 1877	339	101	12	286
Chopper: *See* Cotton-chopper. Meat-chopper.							
Chuck	A. Hurd	190,043	Apr. 24, 1877	1078	328	11	723
Chuck	H. H. Siler and T. A. Brooks	190,090	Apr. 24, 1877	1131	344	11	730
Chuck	J. H. Westcott	187,438	Feb. 13, 1877	521	161	11	284
Chuck, Drill	H. B. Beach	194,122	Aug. 14, 1877	361	107	12	189
Chuck, Drill	C. Elterich	195,997	Oct. 9, 1877	320	90	12	614
Chuck, Drill	C. Elterich	196,205	Oct. 16, 1877	545	158	12	653
Chuck, Drill	H. L. Pratt	194,109	Aug. 14, 1877	344	103	12	286
Chuck for holding pipe-fittings	J. Flower	189,445	Apr. 10, 1877	436	138	11	623
Chuck for lathes, Universal	O. Plummer	194,311	Aug. 21, 1877	554	167	12	322
Chuck for metal-turning lathes	J. H. Harris	186,245	Jan. 16, 1877	431	132	11	81
Chuck for rock-drilling machines	P. S. Buckminster	198,486	Dec. 25, 1877	817	248	12	1088
Chuck, Lathe	F. Armstrong	189,168	Apr. 3, 1877	133	48	11	577
Chuck, Lathe	J. Herriot	196,525	Oct. 30, 1877	898	280	12	722
Chuck, Lathe	E. W. Mathewson	188,392	Mar. 13, 1877	439	136	11	445
Chuck, Metal-lathe	J. G. Hallas and J. N. Webb	197,359	Nov. 20, 1877	664	198	12	873
Chuck, Metal-lathe	A. Saunders	185,838	Jan. 2, 1877	24	8	11	12
Chuck, Metal lathe	A. B. Smith	193,421	July 24, 1877	910	277	12	150
Chuck, Rock-drill	S. Ingersoll	188,141	Mar. 6, 1877	173	53	11	403
Churn	S. Bair	190,406	May 8, 1877	310	91	11	795

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Churn	G. S. Bell	189,685	Apr. 17, 1877	689	212	11	665
Churn	D. F. Blair	194,572	Aug. 28, 1877	820	244	12	367
Churn	G. H. Bradshaw	197,990	Dec. 11, 1877	291	89	12	996
Churn	E. Brough	197,991	Dec. 11, 1877	292	90	12	996
Churn	R. S. Brusie	187,594	Feb. 20, 1877	677	211	11	312
Churn	W. C. Burton	190,466	May 8, 1877	371	108	11	803
Churn	D. C. Chadwick	190,667	May 15, 1877	595	176	11	839
Churn	O. Chase	187,812	Feb. 27, 1877	915	284	11	352
Churn	G. J. Cline and J. Gallagher	194,650	Aug. 28, 1877	884	264	12	376
Churn	N. W. Cone	194,805	Sept 4, 1877	52	17	12	407
Churn	G. W. Crosby	190,010	Apr. 24, 1877	1041	317	11	718
Churn	H. P. Daggett	188,863	Mar. 27, 1877	923	281	11	529
Churn	B. T. Daniels	186,117	Jan. 9, 1877	302	91, 92	11	57
Churn	O. W. Davis	190,199	May 1, 1877	86	24	11	157
Churn	J. A. Duryee	187,525	Feb. 20, 1877	618	191	11	304
Churn	M. K. Duty	198,363	Dec. 18, 1877	681	{207 {208	12	1060
Churn	W. Earle	194,227	Aug. 14, 1877	457	139	12	302
Churn	S. E. Frazier	187,754	Feb. 27, 1877	854	266	11	344
Churn	W. F. Gray	186,420	Jan. 23, 1877	632	193	11	119
Churn	H. C. Green	197,120	Nov. 13, 1877	409	120	12	827
Churn	C. P. Greene	194,145	Aug. 14, 1877	383	113	12	292
Churn	E. Groat	187,130	Feb. 6, 1877	202	66	11	230
Churn	J. B. Guinn	196,223	Oct. 16, 1877	563	163	12	656
Churn	J. Haptonstall and F. B. Preston	197,777	Dec. 4, 1877	74	23	12	956
Churn	J. F. Hennessy	186,837	Jan. 30, 1877	1041	321	11	182
Churn	J. Higgins	186,731	Jan. 30, 1877	928	288	11	168
Churn	G. W. Knapp	187,285	Feb. 13, 1877	367	117	11	264
Churn	W. F. Long	190,029	Oct. 9, 1877	354	100	12	619
Churn	H. S. Lowry	194,044	Aug. 14, 1877	264	78	12	277
Churn	W. McMurry	197,786	Dec. 4, 1877	83	25	12	957
Churn	A. L. McQuary	187,476	Feb. 20, 1877	573	177	11	298
Churn	A. P. Minnick	195,224	Sept. 18, 1877	499	147	12	486
Churn	J. W. Mosher	198,143	Dec. 11, 1877	439	137	12	1018
Churn	F. Murdock	185,948	Jan. 2, 1877	138	41	11	26
Churn	S. Neis	198,145	Dec. 11, 1877	441	138	12	1019
Churn	T. J. Parrish	191,708	June 5, 1877	185	58	11	1002
Churn	H. E. Pendleton	192,838	July 10, 1877	310	91	12	63
Churn	E. Rhoades	194,785	Sept. 4, 1877	31	10	12	404
Churn	J. L. Shipe	197,674	Nov. 27, 1877	995	297	12	930
Churn	J. S. Smith	186,173	Jan. 9, 1877	356	108	11	64
Churn	J. W. Smith	186,501	Jan. 23, 1877	706	217	11	128
Churn	B. C. and J. T. Sprague	194,623	Aug. 28, 1877	862	257	12	373
Churn	W. H. Sterns	194,936	Sept. 4, 1877	181	55	12	425
Churn	W. Stover	196,498	Oct. 23, 1877	852	245	12	704
Churn	S. L. Stuart	196,264	Oct. 16, 1877	609	175	12	662
Churn	J. B. Sweetland	187,933	Feb. 27, 1877	1034	318	11	367
Churn	J. Tull	186,641	Jan. 23, 1877	838	259	11	146
Churn	D. H. Vedder	196,170	Oct. 16, 1877	508	148	12	648
Churn	O. V. Washington	196,507	Oct. 23, 1877	866	250	12	706
Churn	J. and J. S. Weider	193,902	Aug. 7, 1877	102	32	12	249
Churn	V. R. Wilcox, A. and G. Benedict.	194,203	Aug. 14, 1877	433	131	12	299
Churn attachment	J. H. Gray	187,619	Feb. 20, 1877	706	219	11	316
Churn-dasher	F. M. Johnson	189,469	Apr. 10, 1877	459	144	11	626
Churn-dasher	W. M. Landreth	189,631	Aug. 17, 1877	634	196	11	657
Churn-dasher	J. L. Maxwell	189,372	Apr. 10, 1877	366	118	11	614
Churn-dasher	J. G. Montgomery	188,813	Mar. 27, 1877	878	266	11	522
Churn-dasher	J. H. Starnes	189,880	Apr. 24, 1877	911	278	11	701
Churn-dasher	C. J. Syme	186,897	Jan. 30, 1877	1096	339	11	189
Churn-dasher	G. D. Woods	187,955	Feb. 27, 1877	1053	325	11	371
Churn made of bent wood	M. Brown, F. J. McFarland, and J. Brown.	193,918	Aug. 7, 1877	116	37	12	251
Churn-motor	W. W. Hinkle	195,368	Sept. 18, 1877	633	188	12	505
Churn-motor	Z. G. Lasher	196,365	Oct. 23, 1877	723	208	12	687
Churn-power	C. M. Riddle	197,978	Dec. 11, 1877	280	85	12	994
Churn, Power	W. H. Sterns	190,257	May 1, 1877	138	41	11	764
Churn, Reciprocating	A. F. Brooking	190,277	May 1, 1877	165	48	11	767
Churn, Reciprocating	E. Brough	190,734	May 15, 1877	662	196	11	848
Churn, Reciprocating	J. D. Brown and J. A. Roberts	193,478	July 24, 1877	958	291	12	167
Churn, Reciprocating	J. Clinedinst	190,705	May 15, 1877	631	188	11	844
Churn, Reciprocating	J. A. Cubitt	192,900	July 10, 1877	366	108	12	70
Churn, Reciprocating	J. J. Curd	190,288	May 1, 1877	175	52	11	768
Churn, Reciprocating	A. D. Ferris	193,698	July 31, 1877	1203	360	12	210
Churn, Reciprocating	D. A. Fiske	193,151	July 17, 1877	614	186	12	112
Churn, Reciprocating	G. Goff and H. Hardick	194,868	Sept. 4, 1877	112	35	12	416
Churn, Reciprocating	R. E. Grimes	190,578	May 8, 1877	478	142	11	817
Churn, Reciprocating	J. Harris	193,332	July 24, 1877	823	252	12	148
Churn, Reciprocating	A. Heartsill	191,142	May 22, 1877	1065	318	11	909
Churn, Reciprocating	B. Janson	187,864	Feb. 27, 1877	965	300	11	359
Churn, Reciprocating	S. Jeffers	193,119	July 17, 1877	589	178	12	108
Churn, Reciprocating	J. E. Marquis	188,391	Mar. 13, 1877	438	136	11	445
Churn, Reciprocating	N. J. Miller	186,599	Jan. 23, 1877	800	247	11	141
Churn, Reciprocating	A. F. Morgan	192,449	June 26, 1877	984	296	11	1135
Churn, Reciprocating	T. J. Murphy	198,665	Dec. 25, 1877	989	301	12	1113
Churn, Reciprocating	L. C. Roberts	197,898	Dec. 4, 1877	191	58	12	973
Churn, Reciprocating	J. H. Sheffer	187,054	Feb. 6, 1877	151	43	11	220
Churn, Reciprocating	H. C. Sperry	191,726	June 5, 1877	201	63	11	1004
Churn, Reciprocating	J. M. Welch	187,954	Feb. 27, 1877	1053	324	11	370
Churn, Reciprocating	S. Yates	192,104	June 19, 1877	606	185	11	1074
Churn, Rotary	A. J. Borland	191,562	June 5, 1877	50	15	11	983
Churn, Rotary	L. Budahl	192,675	July 3, 1877	130	36	12	30
Churn, Rotary	E. Buell	193,503	Aug. 7, 1877	8	23	12	226

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Churn, Rotary	C. C. Dean	187,521	Feb. 20, 1877	615	190	11	304
Churn, Rotary	H. G. Fougen	193,403	July 24, 1877	889	272	12	157
Churn, Rotary	H. L. Gerdon	190,576	May 8, 1877	476	142	11	816
Churn, Rotary	C. I. Hale	190,581	May 8, 1877	480	143	11	817
Churn, Rotary	T. F. Hatton and J. F. Record	191,676	June 5, 1877	157	48	11	997
Churn, Rotary	J. W. Hazelrigg	198,020	Dec. 11, 1877	318	98	12	1001
Churn, Rotary	C. Isbell	192,869	July 10, 1877	338	99	12	66
Churn, Rotary	W. Knaggs	193,450	July 24, 1877	934	284	12	163
Churn, Rotary	E. Rheades	187,907	Feb. 27, 1877	1010	311	11	364
Churn, Rotary	E. F. Snead and H. C. Stinnett	186,174	Jan. 9, 1877	357	109	11	64
Churn, Rotary	A. J. Stoll	192,540	June 26, 1877	1075	325	11	1146
Churn, Rotary	J. G. Wallace	191,736	June 5, 1877	210	66	11	1005
Churn, Rotary	D. L. Westcott	191,210	May 22, 1877	1131	338	11	919
Churn, Rotary	J. Wolf	194,634	Aug. 28, 1877	870	260	12	374
Cider and wine press	B. B. Bollinger	186,452	Jan. 23, 1877	665	204	11	123
Cider and wine press	J. Schoepflin	189,658	Apr. 17, 1877	662	205	11	661
Cider-mill	Z. Thoman	198,226	Dec. 18, 1877	544	168	12	1040
Cider-mill	J. Weed	198,476	Dec. 25, 1877	805	244	12	1087
Cider-mill, Portable	L. V. Sikes	196,837	Nov. 6, 1877	99	31	12	775
Cider-press	S. M. Ellis	190,713	May 15, 1877	643	191	11	845
Cider-press	D. Phillips	194,560	Aug. 28, 1877	809	241	12	365
Cider-press	R. C. Quinn	187,312	Feb. 13, 1877	396	126	11	368
Cigar	T. H. Babcock and F. C. Upton	196,552	Oct. 30, 1877	925		12	726
Cigar	J. H. Campfield	191,108	May 22, 1877	1033	309	11	905
Cigar	M. Gelsten	190,849	May 15, 1877	759	225	11	862
Cigar	J. Schalscha	186,628	Jan. 23, 1877	829	256	11	145
Cigar-box	B. Ash	192,047	June 19, 1877	555	169	11	1067
Cigar-box	E. A. Ebert	191,038	May 22, 1877	969	287	11	896
Cigar-box	C. Fletcher	187,115	Feb. 6, 1877	190	62	11	228
Cigar-box	F. and E. Hasselbach	187,530	Feb. 20, 1877	622	193	11	305
Cigar-box	H. Meyers	196,920	Nov. 6, 1877	192	56	12	786
Cigar-box	M. A. Penn	197,051	Nov. 13, 1877	334	99	12	816
Cigar-box	J. H. Preater	191,466	May 29, 1877	1383	417	11	961
Cigar-box catch	F. and E. Hasselbach	187,626	Feb. 20, 1877	712	221	11	317
Cigar-boxes and other packages, Revenue-guard for.	F. I. Howe	192,649	July 3, 1877	99	29	12	25
Cigar-bunching machine	C. Lersch	187,149	Feb. 6, 1877	218	71	11	232
Cigar-bunching machine	C. H. Schneider	193,463	July 24, 1877	945	287	12	165
Cigar-bundle	I. A. Wilson	188,716	Mar. 20, 1877	757	232	11	498
Cigar-bundler	E. Detwiler	196,520	Oct. 30, 1877	893	258	12	721
Cigar-case	W. H. Denney	192,238	June 19, 1877	747	228	11	1092
Cigar-cutter	E. Kast	187,641	Feb. 20, 1877	726	225	11	319
Cigar-cutter	H. F. Schultze	190,784	May 15, 1877	704	208	11	853
Cigar-holder	C. Brinker	195,973	Oct. 9, 1877	296	83	12	610
Cigar-holder	F. H. W. Von Tiedemann	188,992	Mar. 27, 1877	1045	322	11	546
Cigar-label	G. W. Yerby	198,724	Dec. 25, 1877	1043	318	12	1121
Cigar-lighter	H. P. Andrews	191,794	June 12, 1877	275	85	11	1018
Cigar-lighter	G. T. Benson	195,082	Sept. 11, 1877	340	103	12	455
Cigar-lighter	L. N. Clawson	190,196	May 1, 1877	83	23	11	157
Cigar-lighter	J. N. Clawson	196,194	Oct. 16, 1877	534	155	12	652
Cigar-lighter	J. T. Hill	187,629	Feb. 20, 1877	716	222	11	317
Cigar-lighter	H. Iden	194,243	Aug. 14, 1877	472	143	12	304
Cigar-lighter	G. Selden and J. M. Keep	189,879	Apr. 24, 1877	909	278	11	701
Cigar-lighter	H. R. Whiteman	196,062	Oct. 9, 1877	385	110	12	623
Cigar-lighter, Automatic	M. L. Ross	190,450	May 8, 1877	354	103	11	801
Cigar, &c., lighting device	E. S. May	196,468	Oct. 23, 1877	817	235	12	700
Cigar-machine	W. B. and R. Barton	196,553	Oct. 30, 1877	926	268	12	726
Cigar-machine	R. A. Bright, jr	185,817	Jan. 2, 1877	5	2	11	9
Cigar-machine	W. Broseker	191,922	June 12, 1877	400	124	11	1034
Cigar-machine	F. W. Felgner	191,231	May 29, 1877	1168	350	11	932
Cigar-machine	F. Haehnel	188,893	Mar. 27, 1877	951	290	11	533
Cigar-machine	C. Müller	188,934	Mar. 27, 1877	988	303	11	538
Cigar-machine	J. S. Winsor	188,559	Mar. 20, 1877	602	186 187	11	477
Cigar-mold	C. Du Brul	197,620	Nov. 27, 1877	950	282	12	923
Cigar mouth-piece	J. L. Gross	186,834	Jan. 30, 1877	1038	320	11	182
Cigar show-box	F. A. Braymer, jr	186,792	Jan. 30, 1877	991	308	11	176
Cigar-tip former	J. Schalscha	195,405	Sept. 18, 1877	669	198	12	511
Cigar-wrapper	W. Broseker	189,182	Apr. 3, 1877	145		11	579
Cigar-wrapper cutter	F. Haehnel	188,892	Mar. 27, 1877	950	290	11	533
Cigars, Manufacture of	G. W. Writner	194,944	Sept. 4, 1877	189	58	12	426
Cigars, Packing	J. W. Shaeffer	195,540	Sept. 25, 1877	813	241	12	539
Cigarette	A. Pearl	186,157	Jan. 9, 1877	337	103	11	62
Cigarette, Asbestus	W. Brisbane	198,075	Dec. 11, 1877	366	114	12	1009
Cigarette-machine	H. H. Bromwell	190,541	May 8, 1877	442	130	11	812
Cigarette-machine	W. Davies	194,807	Sept. 4, 1877	53	18	12	407
Cigarette-machine	D. W. De Forest	188,237	Mar. 13, 1877	284	89	11	424
Cigarette-machine	C. Palatini	190,613	May 8, 1877	512	152 153	11	821
Cigarette-machine	J. Pollak	194,928	Sept. 4, 1877	172	53	12	424
Cigarette mouth-piece	J. R. Saunders	188,543	Mar. 20, 1877	590	182	11	475
Cigarettes, Manufacture of	L. Grosskopf	188,796	Mar. 27, 1877	857	261	11	519
Cigarettes, Manufacture of	A. Willis	191,501	May 29, 1877	1430	431	11	965
Circle-dividing instrument	M. G. Stelp	192,693	June 19, 1877	596	182	11	1073
Clamp:							
See Adjusting-clamp.							
Barrel-head clamp.							
Bedstead clothes-clamp.							
Book-clamp.							
Boring-machine-bit clamp.							
Carpenter's clamp.							
Curtain-tassel clamp.							
Halter-clamp.							
Joiner's clamp.							
Lever-clamp.							
Paper-cutting-machine-clamp.							
Pipe-clamp.							
Railway-clamp.							

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Clamp—Continued.							
See Rock-drill clamp. Rope-clamp. Screw-clamp. Sewing-machine-needle clamp. Trunk-corner clamp. Tubing-clamp. Vine-clamp.							
Clamp	M. L. Edwards	195,994	Oct. 9, 1877	317	89	12	613
Clamp	J. G. Mole	189,767	Apr. 17, 1877	775	237	11	675
Clamp for making frames	J. Zimmerman	189,831	Apr. 17, 1877	831	257	11	683
Clams, Preparing and preserving	H. W. Battles	191,024	May 22, 1877	956		11	894
Clasp:							
See Book-clasp. Braid-package clasp. Braid-roll clasp. Corset-clasp. Glove wrist-clasp. Neck-tie clasp. Pocket-book clasp. Shoe-clasp. Skirt and stocking supporter clasp. Suspender-clasp. Suspender-end clasp. Ticket-clasp. Wristband-clasp.							
Clasp	T. J. Carroll	197,600	Nov. 27, 1877	925	276	12	920
Clasp	E. K. Haynes	198,108	Dec. 11, 1877	404	126	12	1013
Clasp for supporting garments	W. Lamb	195,827	Oct. 2, 1877	133	38	12	580
Clasp or fabric-holder	G. H. Leonard	193,337	July 24, 1877	827	253	12	148
Claw-bar	C. A. Miller	190,887	May 15, 1877	796	236	11	866
Clay, and setting them in kilns for burning, Preparing molded forms of.	H. W. Adams	194,024	Aug. 14, 1877	245	73	12	275
Clay, Machine for tempering	W. H. Smith	193,794	July 31, 1877	1298	389	12	223
Clay-picking machine	R. W. Stieneker	186,896	Jan. 30, 1877	1095	339	11	189
Cleaner:							
See Boiler-cleaner. Boot-cleaner. Car-track cleaner. Chimney-cleaner. Coffee-cleaner. Cotton-cleaner. Flue-cleaner. Grain-cleaner. Grate-cleaner. Knife-cleaner. Knife and fork cleaner. Lamp-chimney cleaner. Pea-nut-cleaner. Rock-drill-hole cleaner. Sewer-cleaner. Slate-cleaner. Steam dish-cleaner. Tongue-cleaner. Window-cleaner.							
Cleansing cloth, yarn, and waste	C. W. Smith	192,844	July 10, 1877	316	92, 93	12	63
Clevis	J. C. Coonley and A. O. Buckius	189,021	Apr. 3, 1877	11	4	11	560
Clevis	W. S. Weir	190,653	May 8, 1877	561	167	11	828
Clevis, Plow	W. S. Weir	192,608	July 3, 1877	53	15	12	19
Clip:							
See Carriage-clip. Halter-clip. Hame-clip. Horseshoe-clip. Lightning-rod connecting-clip. Paper-clip.							
Clipping device	G. W. Tallman	196,724	Oct. 30, 1877	1090	316	12	749
Clipping machine, Horse	P. Casey	194,128	Aug. 14, 1877	368	109	12	289
Cloak	C. Denneler	197,346	Nov. 20, 1877	653	193	12	871
Cloaks, &c., Cord-fastening for	M. Silberstein	197,498	Nov. 27, 1877	820	244	12	905
Clock, Alarm	H. J. and W. D. Davies	188,865	Mar. 27, 1877	924	281	11	529
Clock, Alarm	R. Sayer	190,518	May 8, 1877	422	123	11	809
Clock, Alarm	I. B. Woodruff	193,391	July 24, 1877	878	268	12	155
Clock and calendar case combined	T. H. Mott	194,558	Aug. 28, 1877	808	240	12	365
Clock and gas regulating mechanism combined	G. P. Ganster	197,771	Dec. 4, 1877	66	21, 22	12	955
Clock and mirror combined	H. J. Davies	188,864	Mar. 27, 1877	924	281	11	529
Clock, Calendar	D. J. Gale	192,118	June 19, 1877	622	190	11	1076
Clock, Calendar	T. H. Mott	196,375	Oct. 23, 1877	731	210, 211	12	688
Clock-case	W. F. Lewis	195,028	Sept. 11, 1877	283	86	12	447
Clock-case	A. T. Robinson	188,261	Mar. 13, 1877	302	95	11	427
Clock-dial	H. J. Davies	190,671	May 15, 1877	598	177	11	840
Clock dial, Calendar	F. Kroeber	193,663	July 31, 1877	1173	351	12	205
Clock-dials, signs, &c, Device for illuminating	T. Dickinson	196,972	Nov. 13, 1877	253	75	12	804
Clock, Electric	C. F. Brush	189,998	Apr. 24, 1877	1020	312	11	716
Clock, Geographical	W. A. Cates	197,246	Nov. 20, 1877	552	163	12	856
Clock, Illuminated	R. Leuchsenring	197,530	Nov. 27, 1877	842	251	12	908
Clock, Illuminated dial	H. J. and W. D. Davies	198,577	Dec. 25, 1877	896	274	12	1101
Clock-keys, Manufacture of	F. L. Ellis and B. A. Lewis	197,969	Dec. 11, 1877	273	83	12	993
Clock, Pendulum	H. J. and W. D. Davies	197,832	Dec. 4, 1877	126	39	12	964
Clock-pendulum	A. B. Richmond	196,702	Oct. 30, 1877	1067	310	12	746
Clock-pendulum regulator	H. C. Jacot	198,390	Dec. 18, 1877	708	215	12	1054
Clocks, Device for adjusting the position of	W. F. Wuterich	191,630	June 5, 1877	110	34	11	991
Clocks, Lighting attachment for alarm	H. J. and W. D. Davies	186,317	Jan. 16, 1877	496	152	11	90
Clocks, Winding-alarm for	L. P. Bergstrom	198,268	Dec. 18, 1877	599	181	12	1047
Closet:							
See Chamber-closet. Deodorizing fumigatory closet. Earth-closet. Water-closet.							
Closet for rooms, Adjustable	S. N. Stewart	195,670	Sept. 25, 1877	935	279	12	557
Cloth-cutting machine	M. L. Hodson	187,383	Feb. 13, 1877	464	146	11	277
Cloth-cutting machine	M. E. Sinnott	194,537	Aug. 28, 1877	790	234	12	362
Cloth-cutting machine	A. Warth	186,643	Jan. 23, 1877	839	260	11	146
Cloth-finishing machine	W. H. Leach and A. S. Allen	198,463	Dec. 25, 1877	792	240, 241	12	1085
Cloth-finishing machine	H. Springborn and C. H. Baush	193,193	July 17, 1877	652	199	12	117
Cloth-finishing machine	H. Springborn and C. H. Baush	197,571	Nov. 27, 1877	895	267	12	915
Cloth-finishing machines, Pattern-cylinder for	J. H. Smith	194,057	Aug. 14, 1877	276	82	12	279
Cloth-folding machine	J. D. Elliot	195,493	Sept. 25, 1877	770	226	12	532
Cloth-folding machinery	N. H. Morrill	196,471	Oct. 23, 1877	819	236	12	701
Cloth fulling and scouring machine	R. D. Nesmith	186,363	Jan. 16, 1877	558	170	11	96
Cloth-pressing machines, Bed-piece for	H. Springborn and C. H. Baush	194,186	Aug. 14, 1877	421	127	12	297
Cloth-rack, Revolving	W. H. Parker	187,168	Feb. 6, 1877	235	77	11	234

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
				Spec.	Dr'g.	Vol.	Page.
Cloth-spreader, &c	C. A. Luther	190,600	May 8, 1877	498	148	11	819
Cloth-steaming apparatus	E. Woolson	196,511	Oct. 23, 1877	868	250	12	706
Clothes and fruit drier	G. J. Curry	193,928	Aug. 7, 1877	125	39, 40	12	252
Clothes, Device for supporting and protecting	E. B. Gildersleeve	194,083	Aug. 14, 1877	301	90	12	282
Clothes-drier	D. K. Hickok	195,761	Oct. 2, 1877	68	20	12	571
Clothes-drier	L. N. Hurd	185,927	Jan. 2, 1877	116	35	11	23
Clothes-drier	J. Kahn	189,229	Apr. 3, 1877	194	66	11	585
Clothes-drier	C. B. Koon	193,164	July 17, 1877	627	190	12	113
Clothes-drier	C. B. Koon	194,444	Aug. 21, 1877	688	205	12	340
Clothes-drier	A. A. Peterson	186,612	Jan. 23, 1877	812	251	11	143
Clothes-drier	J. Schater	198,049	Dec. 11, 1877	342	106, 107	12	1005
Clothes-drier	J. Simmons	193,132	July 17, 1877	601	181	12	109
Clothes-drier	G. B. Stephenson	190,524	May 8, 1877	426	125	11	810
Clothes-drier	G. S. Walker	190,171	May 1, 1877	63	17	11	754
Clothes-drier	J. W. Warner	197,701	Nov. 27, 1877	1040	312	12	934
Clothes-drying rack	W. C. Aiken	195,202	Sept. 18, 1877	476	141	12	483
Clothes-line holder	R. Raby, jr	192,188	June 19, 1877	691	212	11	1084
Clothes-line reel	J. H. LeRow	186,586	Jan. 23, 1877	789	243	11	139
Clothes-pin	E. F. Clearwater	193,143	July 17, 1877	609	184	12	111
Clothes-pin	W. S. Davis	186,314	Jan. 16, 1877	495	151	11	90
Clothes-pin	S. B. Hunt	187,143	Feb. 6, 1877	214	70	11	232
Clothes-pin	W. N. Lockwood	187,291	Feb. 13, 1877	373	119	11	265
Clothes-pin	P. Mihan	186,055	Jan. 9, 1877	246	74	11	50
Clothes-pin	D. B. Sanderson and D. H. Linscott.	188,417	Mar. 13, 1877	460	143	11	449
Clothes-pounder	A. Bughee	188,850	Mar. 27, 1877	911	277	11	527
Clothes-pounder	G. A. Crooker	194,586	Aug. 28, 1877	832	247	12	368
Clothes-pounder	E. R. Hampton	186,474	Jan. 23, 1877	685	210	11	125
Clothes-pounder	S. R. Kenyon	193,518	July 24, 1877	1003	303	12	172
Clothes-pounder	J. C. Pickens	197,053	Nov. 13, 1877	337	99	12	816
Clothes-pounder	J. R. Roberts, D. P. Rowe, and L. S. Lane.	189,577	Apr. 17, 1877	585	181	11	651
Clothes-pounder	W. T. Robertson	190,370	May 1, 1877	250	75	11	779
Clothes-pounder	W. T. Robertson	190,372	May 1, 1877	252	75	11	779
Clothes pounder and washer	G. L. Fisher	193,499	July 24, 1877	979	297	12	169
Clothes-rack, Portable	F. Rückwardt	197,979	Dec. 11, 1877	281	86	12	994
Clothes-sprinkler	C. F. W. Maas and W. Schnelke	186,741	Jan. 30, 1877	938	291	11	169
Clothes-washer	J. W. Cheek	191,028	May 22, 1877	959	284	11	895
Clothes-washer	A. Kimber	191,157	May 22, 1877	1077	322	11	911
Clothes-wringer	D. G. Beers	196,777	Nov. 6, 1877	38	12	12	766
Clothes-wringer	G. Campbell	197,695	Nov. 13, 1877	385	113, 114	12	823
Clothes-wringer	A. E. Cooke	194,032	Aug. 14, 1877	252	75	12	276
Clothes-wringer	M. N. Lovell	187,152	Feb. 6, 1877	221	72	11	233
Clothes-wringer	N. B. Phelps	197,893	Dec. 4, 1877	185	36	12	972
Clothes-wringer	J. Young	191,274	May 29, 1877	1208	362	11	937
Clothes-wringer	J. Young	194,981	Sept. 11, 1877	237	72	12	440
Clover-huller	A. Miller	188,064	Mar. 6, 1877	103	37	11	394
Clutch	A. B. Bean	186,296	Jan. 16, 1877	473	146	11	87
Clutch for stopping and starting machinery	M. C. Johnson	195,018	Sept. 11, 1877	274	83	12	445
Clutch, Friction	W. H. Clark	191,314	May 29, 1877	1242	374	11	942
Clutch, Friction	C. H. Robinson	197,177	Nov. 13, 1877	464	137	12	835
Clutch, Friction	M. Rumely	189,062	Apr. 3, 1877	47	17	11	565
Clutch, Shaft-coupling	A. A. Osborn	196,822	Nov. 6, 1877	83	26	12	773
Clutch, Shaft-gearing	W. Adriance	188,562	Mar. 20, 1877	607	188	11	478
Clutching device	H. Fuchs	189,210	Apr. 3, 1877	175	60	11	582
Coach-wrench	R. Jones	188,298	Mar. 13, 1877	341	107	11	432
Coal and ore washer	J. M. Bailey	191,511	June 5, 1877	1	1	11	977
Coal-box	G. M. Church	190,553	May 8, 1877	455	134	11	813
Coal-box	C. Hymers	193,336	July 24, 1877	826	253	12	148
Coal-breakers, Extractor for the teeth of	S. Broadbent	192,734	July 3, 1877	175	51	12	37
Coal-breakers, Teeth for	S. Broadbent	192,733	July 3, 1877	174	50	12	37
Coal-cabinet	G. Rosenqvist	190,079	Apr. 24, 1877	1119	340	11	728
Coal-cutting machine	H. F. Brown	187,702	Feb. 27, 1877	804	249, 250	11	338
Coal-elevator	J. A. Woodward	192,610	July 3, 1877	55	16	12	20
Coal-hod	E. F. O'Toole	191,071	May 22, 1877	997	297	11	900
Coal-hod	W. S. Potwin	190,514	May 8, 1877	419	122	11	809
Coal-meter, Revolving	T. F. Rowland	192,291	June 19, 1877	811	247, 248	11	1100
Coal-screen	E. D. McLean	188,748	Mar. 27, 1877	798	244	11	512
Coal-scuttle	C. S. Irwin	186,481	Jan. 23, 1877	690	212	11	126
Coal-scuttle	W. Richards	187,315	Feb. 13, 1877	410	126	11	368
Coal-tipple for loading boats	J. O'Hanlon	198,383	Dec. 18, 1877	702	213	12	1063
Coal-washing machine	S. Stutz	188,691	Mar. 20, 1877	732	224	11	494
Coat-hanger	T. Donohoe	198,582	Dec. 25, 1877	900	275	12	1101
Cock	J. Dewrance and J. Mallinson	195,707	Oct. 2, 1877	16	5	12	563
Cock, Air-compressor	W. D. Seal	197,414	Nov. 20, 1877	718	214	12	881
Cock and coupling combined, Stop	J. G. Murdock	192,654	July 3, 1877	104	30	12	26
Cock and valve	J. Powell	192,658	July 3, 1877	111	31	12	27
Cock attachment, Stop	S. W. Denniston and C. Simmons	198,579	Dec. 25, 1877	898	274	12	1101
Cock, Automatic	C. H. Scofield	193,556	July 24, 1877	1042	312	12	177
Cock, Automatic cylinder	H. W. Dopp	195,108	Sept. 11, 1877	366	110	12	459
Cock, Automatic cylinder	J. M. Graham	195,500	Sept. 25, 1877	778	238	12	534
Cock, Automatic cylinder	G. F. Hammer	190,680	May 15, 1877	605	179	11	841
Cock, Automatic gas	C. F. Scofield	195,905	Oct. 9, 1877	224	63	12	601
Cock, Basin	J. K. James	192,120	June 19, 1877	627	190	11	1076
Cock box for gas or water, Street stop	A. W. Morgan	192,340	June 26, 1877	880	265	11	1121
Cock box, Stop	G. P. Bowers	193,686	July 31, 1877	1193	357	12	908
Cock, Compression	W. Dodd	197,837	Dec. 4, 1877	132	40	12	964
Cock, Cylinder	G. M. Weinman	198,526	Dec. 25, 1877	854	260	12	1094
Cock for elastic and flexible tubing, Stop	R. Lapham	192,584	July 3, 1877	30	9	12	16

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Cock for steam-boilers, Gage	D. T. Ellis	191,663	June 5, 1877	144	45	11	995
Cock for steam-engines, Pet	M. Meehan	187,661	Feb. 20, 1877	745	231	11	321
Cock for water-mains, Drive	J. D. Keegan and A. Luhrs	191,804	June 12, 1877	287	89	11	1020
Cock, Gage	H. L. Borden	192,145	June 19, 1877	651	199	11	1079
Cock, Gage	H. Distelrath	193,231	July 17, 1877	699	214	12	123
Cock, Lock	C. Jarecki	195,611	Sept. 25, 1877	879	261	12	548
Cock, Lock	G. H. Noyes	195,724	Oct. 2, 1877	35	11	12	565
Cock or faucet for wash-basins, &c	J. E. Boyle	193,801	Aug. 7, 1877	6	2	12	235
Cock, Steam and water	A. Guild and R. S. Lewis	192,622	July 3, 1877	68	20	12	21
Cock, Stop	G. C. Bailey	194,321	Aug. 21, 1877	567	170	12	324
Cock, Stop	M. Burnett	197,994	Dec. 11, 1877	295	90	12	997
Cock, Stop	S. M. Denniston and C. Simmons	194,336	Aug. 21, 1877	582	174	12	326
Cock, Stop	E. Hoxie	192,511	June 26, 1877	1047	315	11	1142
Cock, Stop and waste	W. Porteous and A. B. Roney	195,163	Sept. 11, 1877	423	126	12	467
Cocks and faucets, Attachment for automatically closing.	H. E. Towle and R. H. Plass	189,153	Apr. 3, 1877	123	44	11	576
Cocks or taps, Steam and other	R. J. Crickmer	197,924	Dec. 11, 1877	226	69	12	987
Cockeye	M. Fries	198,097	Dec. 11, 1877	390	122	12	1011
Cockeye and trace-clip	J. W. Hoffman	191,143	May 22, 1877	1065	319	11	909
Cocoa-nuts, Machine for paring	O. R. Chase	194,955	Sept. 11, 1877	211	65	12	437
Cocoa-nuts, Treating	A. P. Ashbourne	194,287	Aug. 21, 1877	530		12	319
Coffee and pea-nut roaster	C. L. Hall	196,964	Nov. 6, 1877	233	70	12	792
Coffee and spice mills, Magnetic protector for	W. A. King	189,046	Apr. 3, 1877	33	12	11	563
Coffee, Apparatus for cleaning and polishing	J. H. Brookmire	192,224	June 19, 1877	730	223	11	1090
Coffee, Apparatus for preparing	J. Mayerhofer	194,702	Aug. 28, 1877	935	278	12	383
Coffee-cleaner	P. McAuliffe	193,416	July 24, 1877	902	275	12	158
Coffee-huller	J. H. Pendleton	190,614	May 8, 1877	514	153	11	822
Coffee hulling and polishing apparatus	H. B. Stevens	190,453	May 8, 1877	357	104	11	801
Coffee-making apparatus	A. G. Buzby	191,106	May 22, 1877	1031	308	11	905
Coffee-mill	D. W. Parker	187,898	Feb. 27, 1877	998	308	11	363
Coffee-mill	A. Reynolds	197,798	Dec. 4, 1877	94	28	12	959
Coffee-mill	A. Shepard	186,889	Jan. 30, 1877	1090	337	11	188
Coffee-mill	H. Stuttle	187,567	Feb. 20, 1877	651	203	11	309
Coffee, Preparing	F. Silver	191,378	May 29, 1877	1293		11	949
Coffee-pot	J. Cromwell	187,107	Feb. 6, 1877	182	59	11	227
Coffee-pot	J. C. Grove	196,658	Oct. 30, 1877	1028	298	12	741
Coffee pot	R. L. Nelson	188,625	Mar. 6, 1877	68	19	11	389
Coffee-pot	R. L. Nelson	189,253	Apr. 3, 1877	221	74	11	588
Coffee-pot	R. L. Nelson	192,593	July 3, 1877	37	11	12	17
Coffee-pot	W. H. Sherwood	193,943	July 10, 1877	401	121	12	76
Coffee-pot	J. B. Smith	188,080	Mar. 6, 1877	116	34	11	396
Coffee-pot	W. W. Stevens	186,378	Jan. 16, 1877	579	177	11	99
Coffee-pot	W. G. Thomason	197,429	Nov. 20, 1877	733	219	12	884
Coffee-roaster	J. H. Bankston	195,251	Sept. 18, 1877	530	154	12	490
Coffee-roaster	J. F. Caldwell and A. F. Pleitz	190,193	May 1, 1877	81	23	11	157
Coffee-roaster	G. Fisher	188,119	Mar. 6, 1877	149	45	11	400
Coffee-roaster	N. Harris	196,225	Oct. 16, 1877	565	163	12	656
Coffee-roaster	A. Jungelas	190,334	May 1, 1877	217	65	11	774
Coffee-roaster	F. Kasiske	197,862	Dec. 4, 1877	154	47	12	968
Coffee-roaster	A. R. J. Lauger	196,681	Oct. 30, 1877	1047	304	12	743
Coffee-roaster	N. Metz	189,124	Apr. 3, 1877	98	35	11	572
Coffee-roaster	G. W. Tinsley and A. Hackman	191,900	June 12, 1877	380	117	11	1031
Coffee roaster and cooler, Combined	J. B. Underwood	196,274	Oct. 16, 1877	619	179	12	663
Coffee-substitute	S. S. Putnam	194,618	Aug. 28, 1877	858		12	373
Coffin	J. A. Hogue	195,369	Sept. 18, 1877	634	188	12	505
Coffin	F. B. James	188,296	Mar. 13, 1877	339	106	11	432
Coffin and casket	L. W. Drake	197,968	Dec. 11, 1877	272	83	12	993
Coffin-handle	C. A. Bailey	195,325	Sept. 18, 1877	595	175	12	500
Coffin-handle	F. X. Gartland	189,449	Apr. 10, 1877	441	139	11	624
Coffin or vault, Cast-iron exterior	R. Beachman	189,596	Apr. 17, 1877	603	186	11	653
Coffins, Removable face-glass for	J. McCarthy	188,393	Mar. 13, 1877	439	136	11	445
Coffins, Screw-fastening for	J. McCarthy	187,883	Feb. 27, 1877	984	305	11	361
Cogs, Machine for cutting wooden	W. L. Morris	198,309	Dec. 18, 1877	630	191	12	1052
Coiled-spring	A. B. Davis	190,291	May 1, 1877	177	53	11	769
Coiled-spring	J. Lndlum	192,175	June 19, 1877	679	208	11	1083
Coin, Box for holding	C. E. McConnell	189,482	Apr. 10, 1877	471	149	11	628
Coin-detecter	P. Doherty	192,241	June 19, 1877	751	230	11	1092
Coin detecter, Counterfeit	E. Kronenberg	195,451	Sept. 25, 1877	730	216	12	527
Coin detecter, Counterfeit	W. H. Rice	196,168	Oct. 16, 1877	566	148	12	648
Coin detecter, Counterfeit	J. W. Sutton	188,982	Mar. 27, 1877	1036	319	11	545
Coin detecter, Counterfeit	J. A. Thompson	187,936	Feb. 27, 1877	1036	319	11	368
Coin detecter, Counterfeit	J. A. Thompson	189,284	Apr. 3, 1877	257	85	11	592
Coin detecter, Counterfeit	J. Wiarda	188,712	Mar. 20, 1877	751	231	11	497
Coin, Device for detecting counterfeit	T. J. Towsey	187,938	Feb. 27, 1877	1038	319	11	368
Coin-drawer	J. A. Read	189,956	Apr. 24, 1877	977	299	11	711
Coin-holder	H. E. Dewey	198,536	Dec. 25, 1877	862	263	12	1095
Coin-holder	E. H. Guild	191,336	May 29, 1877	1260	380	11	945
Coin-holder	H. G. Huested	189,939	Apr. 24, 1877	965	295	11	709
Coin, Metal alloy for commercial	W. W. Hubbell	191,146	May 22, 1877	1068		11	910
Coin, Packaging	H. Croggon	188,599	Mar. 20, 1877	641	198	11	483
Coin-tester	G. M. Hopkins	188,637	Mar. 20, 1877	678	209	11	487
Coin-tray	A. A. Hyde	189,101	Apr. 3, 1877	80	28	11	570
Coin-wrapper	G. Rettig	190,903	May 15, 1877	814	249	11	868
Coin-wrapper	R. L. Ryan	195,658	Sept. 25, 1877	926	275	12	555
Coin-wrapper	E. A. Scott	186,886	Jan. 30, 1877	1087	336	11	188
Coke-crushers, Elevator and conveyor for	F. Marmet	187,158	Feb. 6, 1877	227	74	11	234
Coking coal and desulphurizing coke	L. Stevens	196,714	Oct. 30, 1877	1080	313	12	743
Collar	J. W. A. Cluett	194,031	Aug. 14, 1877	251	71	12	276
Collar	W. Wilson	197,807	Dec. 4, 1877	100	31	12	960
Collar and hame, Combined	E. Stroud	188,081	Mar. 6, 1877	116	35	11	396
Collar and hame, Combined horse	H. W. Thomson	198,227	Dec. 18, 1877	544	168	12	1040
Collar and toy money box combined	E. E. Mack and F. Cook	190,501	May 8, 1877	409	119	11	807
Collar attachment, Horse	L. Deming	198,191	Dec. 18, 1877	509	157	12	1035

Alphabetical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Collar-box and lamp combined	J. Levine	192,378	June 26, 1877	918	276	11	1126
Collar-box and toy bank combined	H. N. Parker	193,420	July 24, 1877	906	276	12	159
Collar-box, Metallic	G. K. Snow	188,687	Mar. 20, 1877	728	223	11	494
Collar, cuff, &c., fastening	T. Moore	194,099	Aug. 14, 1877	318	94	12	284
Collar, Detachable	A. Riley	187,176	Feb. 6, 1877	242	79	11	235
Collar, Dog	H. Elmore	188,043	Mar. 6, 1877	88	26	11	392
Collar-fastener and neck-tie holder	J. Haney	188,358	Mar. 13, 1877	399	124	11	440
Collar, Harness breast	P. Boyden	188,097	Mar. 6, 1877	129	38	11	398
Collar, Harness breast	W. Gibbs	189,308	Apr. 10, 1877	307	97	11	607
Collar, Harness breast	T. C. Maris	185,944	Jan. 2, 1877	145	40	11	26
Collar, Horse	J. K. Pumpelly and E. Collins	186,044	Jan. 9, 1877	237	71	11	48
Collar, Horse	S. D. Reynolds	195,649	Sept. 25, 1877	916	272	12	554
Collar, Horse	A. Rutherford	186,627	Jan. 23, 1877	828	{255 256}	11	145
Collar, Horse	A. Rutherford	188,191	Mar. 6, 1877	229	71, 72	11	410
Collar, Horse	A. Rutherford	195,657	Sept. 25, 1877	924	275	12	555
Collar, Horse	J. N. Schmitz	188,193	Mar. 6, 1877	231	72	11	410
Collar, Horse	S. A. Steadman	196,716	Oct. 30, 1877	1082	314	12	748
Collar, Horse	C. H. Stevens	188,550	Mar. 20, 1877	596	184	11	476
Collar, Horse	M. Turley	194,979	Sept. 11, 1877	235	72	12	440
Collar, Horse	H. W. and C. F. Whitney	189,163	Apr. 3, 1877	129	46	11	577
Collar-pad	M. E. Sauer	198,048	Dec. 11, 1877	342	106	12	1005
Collar pad, Horse	W. Dippert	192,325	June 26, 1877	866	262	11	1119
Collar pad, Horse	A. Foley	190,428	May 8, 1877	332	97	11	798
Collar, Standing	J. K. P. Pine	189,134	Apr. 3, 1877	105	38	11	573
Collars, Blank for horse	L. and J. W. Deming	198,578	Dec. 25, 1877	897	274	12	1101
Collars, Machine for stuffing horse	L. H. Kindy	196,122	Oct. 16, 1877	466	136	12	642
Collars, Machine for stuffing horse	J. M. Lichliter	192,174	June 19, 1877	678	208	11	1082
Coloring matter from aniline, Production of	J. Wolff and R. Betley	189,538	Apr. 10, 1877	525		11	635
Colter and jointer combined	G. K. Smith	192,538	June 26, 1877	1074	324	11	1146
Colter and plow stock	A. H. Farmer	194,665	Aug. 28, 1877	899	268	12	379
Colter-journal	G. Moore	188,750	Mar. 27, 1877	800	245	11	513
Colters and plow standards, Fastener for	J. F. F. Porter	196,385	Oct. 23, 1877	743	214	12	690
Column	A. Bonzano	198,072	Dec. 11, 1877	364	113	12	1008
Combination and seal lock bolt	A. T. and E. O. Boone	196,329	Oct. 23, 1877	666	198	12	682
Combination-lock	H. Clarke	187,101	Feb. 6, 1877	176	58	11	227
Combination-lock	H. Goodrich	195,815	Oct. 2, 1877	123	35	12	578
Combination-lock	A. Parise	186,268	Jan. 16, 1877	452	138	11	84
Combination-lock	O. E. Pillard and E. M. McPherson.	189,902	Apr. 24, 1877	931	284	11	704
Combination-lock	P. Shellenback	190,088	Apr. 24, 1877	1129	343	11	729
Combination-lock	G. Winter	186,393	Jan. 16, 1877	596	182	11	101
Combination-lock, Reversible	H. Goodrich and F. J. Chapman	188,890	Mar. 27, 1877	948	289	11	532
Comb:							
See Curry-comb. Semicircular comb.							
Combs, Machine for producing open work in	S. A. Tisdale	188,034	Mar. 6, 1877	82	23	11	391
Combs, Treating horn for the manufacture of	S. A. Tisdale	192,095	June 19, 1877	599		11	1073
Combustible compound	J. B. D. Cassinelli	186,294	Jan. 16, 1877	472		11	87
Combustion, Device for promoting	S. M. Schindel	196,708	Oct. 30, 1877	1073	312	12	747
Commode	J. Kutscher	195,514	Sept. 25, 1877	791	234	12	536
Commode, Odorless	T. W. McKeever	196,158	Oct. 16, 1877	498	145	12	647
Compass, Draftsmen's	J. B. Fricke	186,419	Jan. 23, 1877	631	192	11	118
Compass, Mariner's	J. A. Marden	198,132	Dec. 11, 1877	431	134	12	1017
Compass, Mariner's	W. Thomson	186,638	Jan. 23, 1877	836	258	11	146
Compasses, Azimuth circle for attachment to ship's	E. S. Ritchie	193,552	July 24, 1877	1037	311	12	176
Compensating-powder	A. E. Miltimore and C. A. L. Totten.	186,211	Jan. 16, 1877	402	123	11	77
Composition articles, Making	W. H. Dibble	192,863	July 10, 1877	332		12	65
Compositor's stand	R. N. Patterson	198,310	Dec. 18, 1877	630	191	12	1053
Compound engine	S. Archbold and J. Haug	190,534	May 8, 1877	435	127	11	811
Compound engine	J. Fish	196,207	Oct. 16, 1877	547	159	12	654
Concrete building	J. Sidebotham	194,734	Aug. 28, 1877	965	286	12	387
Concrete under water, Laying	J. C. Goodridge, jr.	188,123	Mar. 6, 1877	152		11	401
Condenser, Coiled tube rotary	P. S. Forbes	198,288	Dec. 18, 1877	615	186	12	1050
Condenser, Engine	W. J. Allen	193,589	July 31, 1877	1091	327	12	195
Condenser for fractional distillation	F. M. Young	194,856	Sept. 4, 1877	100	32	12	414
Condenser for spelter-retorts	E. H. Richter	193,461	July 24, 1877	944	287	12	165
Condenser, Mercury	W. H. Long and A. W. Castle	191,805	June 12, 1877	287	90	11	1020
Condenser, Quicksilver	R. F. Knox	191,687	June 5, 1877	167	52	11	999
Condensing apparatus for steam-engines, Compound	J. Houpt	196,902	Nov. 6, 1877	172	50	12	784
Confectionery composition	F. Sibley, J. Holmwood, jr., and A. Luckenbach.	193,045	July 10, 1877	503		12	89
Confectionery, Putting up	H. H. Snow	189,807	Apr. 17, 1877	811	250	11	680
Connecting-rod	G. W. Wilks	194,633	Aug. 28, 1877	870	259	12	374
Convertible chair	E. S. French and L. Hunting	188,120	Mar. 6, 1877	150	45, 46	11	460
Convertible chair	C. G. Pease	195,390	Sept. 18, 1877	655	194	12	509
Convertible chair	J. P. True	191,733	June 5, 1877	209	65, 66	11	1005
Convertible chair and cradle	H. J. Beaudet	195,333	Sept. 18, 1877	604	178	12	501
Convertible rocking chair and crib	J. E. Pitcher	197,492	Nov. 27, 1877	813	{242 243}	12	904
Convertible seat and couch	C. A. Mikinas	188,749	Mar. 27, 1877	799	245	11	512
Cooker, Agricultural steam	F. Farley and J. B. Blackwood	191,127	May 22, 1877	1048	314	11	907
Cooker, Feed	H. I. Aldrich	188,326	Mar. 13, 1877	368	115	11	436
Cooker, Feed	S. J. Daily	197,613	Nov. 27, 1877	940	279	12	922
Cooker, Feed	J. P. Martin	187,877	Feb. 27, 1877	977	303	11	360
Cooker, Feed	M. B. Mills	194,164	Aug. 14, 1877	401	120	12	294
Cooker, Steam	A. A. Brooks	196,069	Oct. 16, 1877	401	116	12	633
Cooker, Steam	M. J. McCullough	197,649	Nov. 27, 1877	976	291	12	927
Cooking apparatus	E. N. Horsford	188,245	Mar. 13, 1877	291	91	11	425
Cooking apparatus	E. Miller	186,148	Jan. 9, 1877	331	101	11	61
Cooking apparatus	J. G. Smith	198,316	Dec. 18, 1877	635	193	12	1053
Cooking apparatus, Steam	J. Chase	197,512	Nov. 27, 1877	835	249	12	906
Cooking apparatus, Steam-feed	C. and W. Kramer	190,873	May 15, 1877	784	232	11	864

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Cooking cereals, Device for and method of	L. S. Chichester	192,362	June 26, 1877	903	271	11	1124
Cooking device, Steam	A. F. Bock	194,288	Aug. 21, 1877	531	161	12	319
Cooking fish and meat in cans, Steam-tank for	F. M. Warren	189,407	Apr. 10, 1877	402	127	11	619
Cooking, heating, and drying apparatus	D. K. Boswell	197,321	Nov. 20, 1877	627	184	12	867
Cooking, Steam	E. E. Post and E. W. Furbush	198,212	Dec. 18, 1877	530	163	12	1038
Cooking utensil	R. D. Clark and R. Wells	193,486	July 24, 1877	965	293	12	168
Cooler: *See* Beer-cooler. Milk-cooler. Lard-cooler. Water and wine cooler.							
Cooling-board	T. H. Graves	190,310	May 1, 1877	195	58	11	771
Cooling or disinfecting the air of rooms	B. W. James	195,374	Sept. 18, 1877	640	190	12	506
Coop, Chicken	D. M. Sullivan and T. A. Rotallie	191,621	June 5, 1877	103	32	11	990
Coop, Chicken	R. L. and N. J. Todd	191,556	June 5, 1877	47	14	11	982
Cop-builder	W. B. Parkhurst	185,834	Jan. 2, 1877	20	7	11	11
Copper and the precious metals from copper matte, Separating.	W. B. Young	192,401	June 26, 1877	943		11	1129
Copper, &c., Feathering or comminuting	J. R. Cooper	192,113	June 19, 1877	615	188	11	1075
Copy-holder	F. H. Joyner	186,480	Jan. 23, 1877	689	211	11	126
Copy-holder	J. W. T. Peltier and T. D. Brown	195,043	Sept. 11, 1877	301	91	12	449
Copying-book, Manifold	W. H. Ellis and W. McDonald	196,144	Oct. 16, 1877	488	142	12	645
Copying-press	E. Gill	193,404	July 24, 1877	890	272	12	157
Copying-press	R. E. Kidder	188,469	Mar. 20, 1877	526	162	11	466
Copying-press	J. A. Powlett	193,346	July 24, 1877	836	256	12	149
Copying-press	G. A. Smith	192,299	June 19, 1877	821	250	11	1101
Copying-press	G. A. Smith	192,300	June 19, 1877	822	250	11	1101
Copying-press	M. V. Woodhull	195,429	Sept. 18, 1877	695	206	12	514
Copying-press pad	S. W. Cox	194,132	Aug. 14, 1877	372	110	12	290
Copying-press, Stencil	A. E. Hix	186,733	Jan. 30, 1877	930	288	11	168
Cordage, Twisting-spindle for making	C. E. Brownell	193,141	July 17, 1877	607	184	12	110
Core-box	W. Aikin and W. W. Drummond	192,536	July 3, 1877	1	1	12	13
Core-box, Sand	J. Powell	192,657	July 3, 1877	108	31	12	27
Core for casting metal pipes, Collapsible	J. Pennycook	189,492	Apr. 10, 1877	480	152	11	629
Core for molding metal	R. C. Totten	195,966	Oct. 9, 1877	287	81	12	610
Cores from molds, Removing	H. H. Fisher	185,905	Jan. 2, 1877	90	28	11	20
Cork-cutting machine	G. Hammer	197,514	Nov. 27, 1877	837	250	12	907
Cork-cutting machine	T. A. Warrington and C. Harwood	197,189	Nov. 13, 1877	476	140, 141	12	837
Cork-fastening machine	A. Werner	195,734	Oct. 2, 1877	46	13	12	567
Cork, stopper, or bung for cans, barrels, &c	T. Tully	189,071	Apr. 3, 1877	57	21	11	567
Corkscrew	J. E. Baum	197,201	Nov. 20, 1877	508	149	12	849
Corkscrew	M. L. Crannell	190,669	May 15, 1877	596	177	11	839
Corkscrew	G. Havell	196,226	Oct. 16, 1877	566	164	12	656
Corkscrew and extractor combined	N. Oak	196,761	Nov. 6, 1877	25	7	12	764
Corkscrew-frame	J. L. Hydo	195,450	Sept. 25, 1877	730	215	12	527
Corn-ball press	C. E. Vankeuren	189,074	Apr. 3, 1877	58	21	11	567
Corn-crib	C. E. Davis	187,750	Feb. 27, 1877	849	265	11	343
Corn-crib, Portable	B. F. Bedwell	192,410	June 26, 1877	950	284	11	1130
Corn-drill	D. Kerschner	189,044	Apr. 3, 1877	31	11	11	563
Corn drills or planters, Dropping attachment to	J. H. Farmer	192,243	June 19, 1877	753	230	11	1093
Corn-dropper	J. Putnam	188,754	Mar. 27, 1877	804	246	11	513
Corn-dropper	J. P. Simmons	191,723	June 5, 1877	198	62	11	1003
Corn-fodder, Machine for preparing	D. F. Hull	194,776	Sept. 4, 1877	22	6	12	403
Corn-gatherer	M. P. Brown	190,546	May 8, 1877	447	132	11	813
Corn-husking implement	M. L. Huss	187,144	Feb. 6, 1877	214	70	11	232
Corn-knife	W. Millspaugh	192,704	July 3, 1877	153	43	12	34
Corn-popper	G. P. Sisson	186,279	Jan. 16, 1877	460	141	11	85
Corn-sheller	Z. T. Blackwell	186,075	Jan. 9, 1877	263	79	11	52
Corn-sheller	C. Goddard	186,830	Jan. 30, 1877	1034	319	11	182
Corn-sheller	J. M. Hawley	187,850	Feb. 27, 1877	954	296	11	357
Corn-sheller	A. E. Lake	198,397	Dec. 18, 1877	714	217	12	1065
Corn-sheller	E. S. McEwen	190,721	May 15, 1877	651	193	11	846
Corn-sheller	H. Neubert	189,130	Apr. 3, 1877	102	27	11	573
Corn-shelling implement	H. P. Meggs	188,931	Mar. 27, 1877	986	303	11	538
Corn-shelling machine	J. Lippincott, jr.	190,344	May 1, 1877	225	67	11	776
Corn-shelling machine	J. S. Marsh	194,700	Aug. 28, 1877	933	277, 278	12	383
Corn-shelling machine	C. D. Read	193,130	July 17, 1877	599	181	12	109
Corn-shelling machine	A. H. Shreffler	188,263	Mar. 13, 1877	303	96	11	427
Corn-shelling machine	C. P. S. Wardwell	194,018	Aug. 7, 1877	221	65, 66	12	264
Corn-stalk cutter	W. Barnes	198,070	Dec. 11, 1877	363	113	12	1008
Corn-stalk cutter	J. P. Brower	190,118	May 1, 1877	5	2	11	747
Corn-stalk cutter	B. C. Clevenger	194,332	Aug. 21, 1877	577	173	12	325
Corn-stalk cutter	W. Gans	187,371	Feb. 13, 1877	453	143	11	275
Corn-stalk cutter	G. Johnston, J. Cairns, and M. K. Johnston.	186,479	Jan. 23, 1877	688	211	11	126
Corn-stalk cutting implement	J. Wahner	193,579	July 24, 1877	1063	318	12	179
Corn-stalk press	E. P. and J. E. Davis and J. Fisk	189,925	Apr. 24, 1877	952	291	11	707
Corn-stripper, Green	W. A. L. Kirk	197,145	Nov. 13, 1877	432	127	12	830
Corner, Bent-wood	B. Burr	187,449	Feb. 20, 1877	547	269	11	295
Corner-stake	S. D. Bonner	191,919	June 12, 1877	396	123	11	1034
Cornice and picture-rod molding combined	L. J. Baker	194,952	Sept. 11, 1877	209	65	12	437
Cornice, Window	S. Sargeant	191,077	May 22, 1877	1003	298	11	901
Corpse-preserving composition	G. Henry	188,903	Mar. 27, 1877	960		11	534
Corrugating machine, Sheet-metal	G. F. Kissam	191,441	May 29, 1877	1356	410	11	957
Corset	J. Bale and L. Goldberg	192,720	July 3, 1877	170	49	12	36
Corset	J. D. Banfield	197,588	Nov. 27, 1877	913	272, 273	12	918
Corset	M. P. Bray	190,274	May 1, 1877	161	47	11	767
Corset	H. M. Chapman	198,348	Dec. 18, 1877	665	202, 203	12	1057
Corset	M. E. Clark	194,030	Aug. 14, 1877	250	74	12	275
Corset	G. L. Du Laney	193,491	July 24, 1877	971	295	12	168
Corset	S. B. Ferris	188,007	Mar. 6, 1877	50	14	11	387
Corset	S. B. Ferris	195,755	Oct. 2, 1877	64	19	12	570

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Corset	S. F. Follette	188,616	Mar. 20, 1877	654	202	11	484
Corset	L. H. Foy	197,463	Nov. 27, 1877	784	234	12	900
Corset	L. H. Foy	198,597	Dec. 25, 1877	915	279	12	1103
Corset	T. S. Gilbert	194,867	Sept. 4, 1877	111	34	12	416
Corset	T. F. Hamilton	188,894	Mar. 27, 1877	953	291	11	533
Corset	T. F. Hamilton	195,271	Sept. 18, 1877	549	159	12	493
Corset	T. F. Hamilton	196,661	Oct. 30, 1877	1030	299	12	741
Corset	M. M. Harriman	190,032	Apr. 24, 1877	1065	324	11	721
Corset	M. W. Henius	188,630	Mar. 20, 1877	671	207	11	486
Corset	W. S. and C. F. Hunt	196,020	Oct. 9, 1877	342	97	12	617
Corset	J. Mayer	186,210	Jan. 16, 1877	401	123	11	77
Corset	C. A. McGee	187,657	Feb. 20, 1877	742	229	11	320
Corset	C. A. McGee	194,045	Aug. 14, 1877	265	78	12	277
Corset	J. P. McLean	188,023	Mar. 6, 1877	64	19	11	389
Corset	J. Mead	194,526	Aug. 28, 1877	780	231	12	361
Corset	L. A. Palmer	189,777	Apr. 17, 1877	784	241	11	676
Corset	F. W. Perrott	186,043	Jan. 9, 1877	236	71	11	48
Corset	E. S. Reed	186,917	Jan. 30, 1877	1116	345	11	192
Corset	E. S. Smith	197,677	Nov. 27, 1877	997	298	12	930
Corset	J. M. Van Orden	196,727	Oct. 30, 1877	1091	317	12	750
Corset	I. D. Warner	189,405	Apr. 10, 1877	400	127	11	619
Corset	I. D. and L. C. Warner	193,200	July 17, 1877	657	201	12	118
Corset	I. D. Warner	197,913	Dec. 4, 1877	207	63	12	975
Corset	A. M. Weber	196,403	Oct. 23, 1877	757	218	12	692
Corset	E. S. Weldon	189,672	Apr. 17, 1877	676	209	11	663
Corset, Abdominal	C. Lascell	186,258	Jan. 16, 1877	442	136	11	83
Corset-clasp	J. H. Bongartz	198,269	Dec. 18, 1877	600	181	12	1047
Corset-clasp	T. C. Candlish	196,429	Oct. 23, 1877	777	224	12	695
Corset-clasp	W. S. Phyfe	187,308	Feb. 13, 1877	393	125	11	367
Corset-clasp	G. W. Reynolds	191,467	May 29, 1877	1384	417	11	961
Corset-clasp	A. K. Scofield	196,940	Nov. 6, 1877	213	62	12	789
Corset-clasp, &c., catch	M. H. Bergen	188,228	Mar. 13, 1877	277	86	11	423
Corset-dummy	J. J. Wilson	187,336	Feb. 13, 1877	421	132	11	271
Corset skirt-snpporter	T. F. Hamilton	191,672	June 5, 1877	154	47	11	987
Corset skirt-supporter	L. S. Weed	193,582	July 24, 1877	1065	319	12	180
Corset, Skirt-supporting	D. H. Fanning	191,949	June 12, 1877	429	133	11	1038
Corset-stay	M. P. Bray	192,894	July 10, 1877	361	106	12	69
Corset-steel	H. I. Gould	196,221	Oct. 16, 1877	560	162	12	655
Cotton and hay press	B. J. Methvin	196,032	Oct. 9, 1877	356	101	12	619
Cotton boll or hull separator	J. A. Smiley	192,393	June 26, 1877	937	281	11	1128
Cotton-chopper	G. W. Banks	191,219	May 29, 1877	1158	347	11	931
Cotton-chopper	S. N. Camp	198,274	Dec. 18, 1877	603	182	12	1048
Cotton-chopper	J. B. Eaves	189,347	Apr. 10, 1877	343	110	11	611
Cotton-chopper	J. H. Gilleland	185,916	Jan. 2, 1877	107	32	11	22
Cotton-chopper	J. P. Harrisson	188,895	Mar. 27, 1877	953	291	11	533
Cotton chopper and scraper combined	E. C. L. Bridges	190,815	May 15, 1877	730	216	11	857
Cotton-cleaner	J. A. Bowers and M. Adar	186,981	Feb. 6, 1877	71	24	11	211
Cotton-cleaner	J. Greaves	190,314	May 1, 1877	198	59	11	772
Cotton-cleaner	E. H. Taliaferro and S. Kline, sr.	187,782	Feb. 27, 1877	885	275	11	348
Cotton-cleaner	C. O. Thomas and T. Robertson	192,951	July 10, 1877	413	124	12	77
Cotton cleaner and condenser	J. T. Donovan	197,617	Nov. 27, 1877	947	281	12	922
Cotton cleaner and condenser	J. Greaves	190,313	May 1, 1877	197	58, 59	11	772
Cotton cleaner and condenser	F. E. Smith	192,134	June 19, 1877	638	195	11	1077
Cotton cleaning and straightening machine	J. R. Miles and H. F. Robinson	188,164	Mar. 6, 1877	197	61	11	406
Cotton-gin	R. Dickinson	194,136	Aug. 14, 1877	374	111	12	291
Cotton-gin	P. C. Sawyer	186,882	Jan. 30, 1877	1084	335	11	188
Cotton-gin	J. W. Thorn	186,383	Jan. 16, 1877	584	179	11	99
Cotton-gin	W. O. Watson	186,910	Jan. 30, 1877	1110	343	11	191
Cotton-gin feeder	F. Coons and E. Van Winkle	186,804	Jan. 30, 1877	1001	311	11	178
Cotton-gin feeder	S. J. Dorris	196,199	Oct. 16, 1877	539	136	12	652
Cotton-gin feeder	J. W. Elliott	194,661	Aug. 28, 1877	896	267	12	378
Cotton-gin feeder	F. E. Smith	194,738	Aug. 28, 1877	968	288	12	388
Cotton-gin feeder and cleaner	G. W. McCauley	188,928	Mar. 27, 1877	983	301, 302	11	537
Cotton-gin feeding attachment	M. M. Massey	194,833	Sept. 4, 1877	77	25	12	411
Cotton-gin flue	L. C. Glover	193,700	July 31, 1877	1204	361	12	210
Cotton-gin roll-box	W. O. Watson	193,580	July 24, 1877	1064	319	12	180
Cotton harrow and chopper	J. F. Price	193,830	Aug. 7, 1877	33	11	12	239
Cotton, Machine for opening and cleaning	W. E. Whitehead and A. T. Atherton.	190,107	Apr. 24, 1877	1150	350	11	732
Cotton, &c., Machine for opening and separating	R. Kitson	187,538	Feb. 20, 1877	627	195	11	306
Cotton, &c., Method and apparatus for treating	F. G. Wheeler	193,203	July 17, 1877	660	202	12	118
Cotton opener and cleaner	R. Kitson	193,094	July 17, 1877	567	171	12	105
Cotton-openers, Beater for	R. Kitson	194,355	Aug. 21, 1877	600	179	12	328
Cotton-picker	O. R. Smith	189,396	Apr. 10, 1877	393	125	11	618
Cotton-picker	J. Tripp	189,815	Apr. 17, 1877	817	252	11	681
Cotton-press	A. Baldwin	190,405	May 8, 1877	309	91	11	795
Cotton-press	C. J. Beasley	189,177	Apr. 3, 1877	140	50	11	578
Cotton-press	J. T. Burr	186,538	Jan. 23, 1877	742	227	11	133
Cotton-press	S. A. Clemens	187,814	Feb. 27, 1877	917	284, 285	11	352
Cotton-press	S. H. Gilman	188,290	Mar. 13, 1877	331	104	11	430
Cotton-press	W. Golding	188,513	Mar. 20, 1877	564	174	11	471
Cotton-press	G. C. McKee	189,121	Apr. 3, 1877	96	34	11	572
Cotton-press	J. Templeton	189,148	Apr. 3, 1877	119	42	11	575
Cotton-scraper	C. W. McMurry	196,244	Oct. 16, 1877	587	169, 170	12	659
Cotton scraper and cultivator combined	M. Boby	191,613	June 5, 1877	95	30	11	989
Cotton-seed, Obtaining fiber from	W. Adamson	195,969	Oct. 9, 1877	292		12	610
Cotton separator and cleaner	R. R. Gwathney	198,105	Dec. 11, 1877	401	125, 126	12	1013
Cotton, Sizing and dressing	F. P. Jenkins	194,245	Aug. 14, 1877	475		12	305
Cotton-tie	C. S. Coleman	187,599	Feb. 20, 1877	683	212	11	313

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Couches, Head section for	C. Raabe	198,681	Dec. 25, 1877	1002	305	12	1115
Countersink	D. J. Adams	186,513	Jan. 23, 1877	715	220	11	129
Countersink	D. F. Barber	195,877	Oct. 9, 1877	194	55	12	597
Coupling: *See* Belt-coupling. Car-coupling. Cultivator-coupling. Harrow-coupling. Hose-coupling. Lightning-rod coupling. Pipe-coupling. Rod-coupling. Sled-coupling. Sucker-rod coupling. Telegraph-coupling. Thill-coupling. Vehicle-shaft coupling. Vehicle-spring coupling.							
Cover for vessels, Wooden	C. Isbell and E. C. Taylor	195,012	Sept. 11, 1877	268	82	12	445
Cow-fetter	A. R. Gillis	196,008	Oct. 9, 1877	330	94	12	615
Cow's bag protector	M. R. Dowlin	198,282	Dec. 18, 1877	610	184	12	1049
Cows, Cage for restraining	B. B. Mann	190,345	May 1, 1877	226	67	11	776
Cowl: *See* Chimney-cowl.							
Cracker-machine	C. L. Vale	187,069	Feb. 6, 1877	143	48	11	222
Cradle	G. Buchanan	188,581	Mar. 20, 1877	626	193	11	480
Cradle	J. L. Butler	190,817	May 15, 1877	733	217	11	858
Cradle	C. Eilrich	197,461	Nov. 27, 1877	781	233	12	899
Cradle	J. A. Kirchner	186,737	Jan. 30, 1877	935	290	11	169
Cradle	C. O. Sobinski	187,426	Feb. 13, 1877	507	157	11	282
Cradle and crib	L. Atwood	185,848	Jan. 2, 1877	34	11	11	13
Cradle, Automatic	C. Barlow	192,406	June 26, 1877	947	283	11	1129
Cradle, Grain	G. E. Clow	194,131	Aug. 14, 1877	371	110	12	290
Cradle or crib, Swinging	J. McNeal	198,405	Dec. 18, 1877	723	219	12	1066
Cradle, Rocking	I. Bushong	190,417	May 8, 1877	321	94	11	796
Cradle-snath band	W. H. Kretsinger	185,935	Jan. 2, 1877	128	38	11	24
Cranberry-gatherer	L. L. and D. Lumbert	198,641	Dec. 25, 1877	963	294	12	1110
Cranberry-separator	J. C. Hinchman	188,053	Mar. 6, 1877	95	28	11	393
Crane	B. Jones	191,437	May 29, 1877	1349	409	11	956
Crane, Traveling	W. H. Elliot	194,035	Aug. 14, 1877	254	76	12	276
Crane, Traveling	T. A. Weston	198,718	Dec. 25, 1877	1036	315 316	12	1120
Crank and crank-shaft	R. P. Houston	188,138	Mar. 6, 1877	171	52	11	403
Crank, Compensating	R. D. Milne	187,402	Feb. 13, 1877	481	150	11	279
Crape, laces, &c., Restoring	E. B. Reid	194,264	Aug 14, 1877	492		12	307
Crate: *See* Egg-crate. Fruit-crate. Folding crate.							
Crayon	O. W. Swasey	196,054	Oct. 9, 1877	376	107	12	622
Crayon for marking on glass, &c	B. J. Clarke	189,338	Apr. 10, 1877	337		11	610
Crayon-holder	A. B. Greenwalt	196,352	Oct. 23, 1877	709	204	12	685
Cream from milk, Obtaining	W. Cooley	187,516	Feb. 20, 1877	610	189	11	303
Cream, Raising	J. S. Watrous	198,171	Dec. 11, 1877	468	147	12	1022
Crib	J. H. Powers	185,960	Jan. 2, 1877	149	45	11	28
Crib, Bed	E. Rothmann	194,976	Sept. 11, 1877	228	71	12	439
Crib, Child's folding	H. W. Röpe	194,266	Aug. 14, 1877	494	150	12	307
Crib, Folding	W. G. Reed	198,155	Dec. 11, 1877	451	141	12	1020
Crockery-ware, Ornamenting	E. J. Gerard	189,450	Apr. 10, 1877	442		11	624
Croquet apparatus, Parlor	H. Van Hoevenbergh	197,504	Nov. 27, 1877	828	247	12	905
Croquet-stand	A. Erlebach	187,259	Feb. 13, 1877	342	109	11	261
Crowbar	T. H. Spurr and W. Upton	195,412	Sept. 18, 1877	677	200	12	512
Crozing and howeling machine	J. A. Seaman	189,878	Apr. 24, 1877	907	277	11	701
Crucibles and pots, Apparatus for molding	R. Taylor	192,604	July 3, 1877	49	14	12	19
Crucibles, Compound for manufacture of	H. Wile	192,398	June 26, 1877	941		11	1128
Crucibles, Machine for making plumbago	J. C. Cline	197,335	Nov. 20, 1877	643	190	12	869
Crucibles, Manufacture of	J. Park, jr., and G. Hay	192,345	June 26, 1877	886		11	1121
Crucibles, retorts, &c., Compound for	R. W. Wallace	196,061	Oct. 9, 1877	385		12	623
Cruets, Device for tilting	T. A. Fitzsimons	197,263	Nov. 20, 1877	566	167	12	858
Crusher: *See* Grain-crusher. Ore-crusher. Stone and ore crusher.							
Crushing and grinding mill	T. Roberts and T. Cadugan	197,981	Dec. 11, 1877	282	86	12	995
Crutch	L. F. Weldon	190,392	May 1, 1877	278	81	11	782
Cryptographic device	F. S. Baldwin	197,199	Nov. 20, 1877	506	149	12	849
Cuff	E. K. Betts	196,555	Oct. 30, 1877	928	269	12	726
Cuff	E. K. Betts	196,556	Oct. 30, 1877	929	269	12	726
Cuff	E. S. House	192,333	June 26, 1877	873	264	11	1120
Cuff-fastener	J. H. Myers	194,837	Sept. 4, 1877	80	26	12	412
Culinary apparatus	L. Lightfoot and J. J. Hawk	197,871	Dec. 4, 1877	163	50	12	969
Culinary boiler	I. A. Robinson	189,877	Apr. 24, 1877	906	277	11	701
Culinary steamer	O. W. Wren	188,036	Mar. 6, 1877	84	24	11	301
Culinary vessel	G. A. Culbertson	194,224	Aug. 14, 1877	451	137	12	302
Cultivator	R. W. Alexander	190,179	May 1, 1877	69	19	11	755
Cultivator	I. Barber	198,069	Dec. 11, 1877	362	112	12	1008
Cultivator	R. T. Bowne	198,563	Dec. 25, 1877	855	270	12	1098
Cultivator	N. T. Brewster and A. D. Neher	191,101	May 22, 1877	1027	307	14	904
Cultivator	A. Busenger	190,280	May 1, 1877	167	49	11	768
Cultivator	J. S. Butterfield	195,979	Oct. 9, 1877	304	85	12	611
Cultivator	W. E. Dewey	191,660	June 5, 1877	142	44	11	995
Cultivator	J. J. Faulkner	192,060	June 19, 1877	567	172	11	1068
Cultivator	T. D. Guthrie, jr	194,146	Aug. 14, 1877	384	114	12	292
Cultivator	S. N. Hench	192,992	July 10, 1877	449	135	12	82
Cultivator	A. P. Henery	195,125	Sept. 11, 1877	384	115	12	462
Cultivator	J. Higgins	198,616	Dec. 25, 1877	938	287	12	1106
Cultivator	F. L. Hilsabeck	197,032	Nov. 13, 1877	313	93	12	813
Cultivator	H. S. Hoyman	196,903	Nov. 6, 1877	173	50	12	784
Cultivator	J. S. Johnston and C. A. Johnson	198,624	Dec. 25, 1877	949	289	12	1108
Cultivator	A. Jones	196,670	Oct. 30, 1877	1037	301	12	742
Cultivator	J. Jones	191,347	May 29, 1877	1269	383	11	946
Cultivator	J. H. Jones	185,932	Jan. 2, 1877	122	37	11	21

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Cultivator	I. S. Krick	197,867	Dec. 4, 1877	158	48	12	968
Cultivator	H. P. Kynelt	192,922	July 10, 1877	385	114	12	73
Cultivator	S. F. Lee	187,470	Feb. 20, 1877	568	176	11	297
Cultivator	J. M. Long	189,896	Apr. 24, 1877	926	282	11	703
Cultivator	J. M. Ludlow and S. C. Pruitt	198,204	Dec. 18, 1877	521	161	12	1037
Cultivator	E. P. Lynch and E. A. Wright	191,451	May 29, 1877	1360	413	11	959
Cultivator	A. S. McDermott	191,606	June 5, 1877	88	27	11	988
Cultivator	T. W. McDill	190,606	May 8, 1877	504	150	11	820
Cultivator	C. McGee	193,532	July 24, 1877	1015	306	12	174
Cultivator	T. F. McNair	191,458	May 29, 1877	1375	415	11	959
Cultivator	N. Messenger and J. Erwin	191,990	June 12, 1877	469	145	11	1043
Cultivator	W. Mettler	196,818	Nov. 6, 1877	80	24,25	12	772
Cultivator	H. W. Nichols	188,815	May 27, 1877	880	267	11	523
Cultivator	O. A. Olmsted	191,996	June 12, 1877	475	146	11	1044
Cultivator	H. H. Pattee	187,899	Feb. 27, 1877	998	309	11	363
Cultivator	J. H. Pattee	195,042	Sept. 11, 1877	300	91	12	449
Cultivator	E. H. and S. D. Perkins	186,611	Jan. 23, 1877	811	250	11	142
Cultivator	J. Poetz	194,108	Aug. 14, 1877	343	102	12	286
Cultivator	R. B. Robbins	187,235	Feb. 13, 1877	317	102 103	11	257
Cultivator	W. J. Robertson and P. Knight	191,179	May 22, 1877	1099	328	11	914
Cultivator	J. Sherrill	192,462	June 26, 1877	993	299	11	1136
Cultivator	R. H. Sliver	198,698	Dec. 25, 1877	1017	309	12	1117
Cultivator	J. W. Sohn	195,459	Sept. 25, 1877	738	218	12	528
Cultivator	D. Stanchfield	194,009	Aug. 7, 1877	211	63	12	263
Cultivator	J. C. Stevens	189,513	Apr. 10, 1877	498	157	11	632
Cultivator	G. Storm	192,541	June 26, 1877	1076	325	11	1146
Cultivator	P. Studer	186,065	Jan. 9, 1877	255	77	11	51
Cultivator	J. Summers and J. Trimble	194,482	Aug. 21, 1877	727	216	12	345
Cultivator	P. S. Tartt and G. F. Wilson	192,029	June 12, 1877	510	156	11	1049
Cultivator	J. P. Terry	197,184	Nov. 13, 1877	472	139	12	836
Cultivator	J. C. B. Thomas	194,190	Aug. 14, 1877	423	128	12	297
Cultivator	J. R. Tilley	190,796	May 15, 1877	713	211	11	855
Cultivator	M. L. Utter	197,503	Nov. 27, 1877	826	246 247	12	905
Cultivator	W. C. Ward	193,059	July 10, 1877	516	156	12	90
Cultivator, Adjustable wheel	D. Archer	194,570	Aug. 28, 1877	819	243	12	367
Cultivator and corn-planter combined	J. F. Poole	186,873	Jan. 30, 1877	1078	333	11	187
Cultivator and cotton-chopper	J. M. Gardner	186,571	Jan. 23, 1877	771	238	11	137
Cultivator and planter, Combined cotton	M. T. Skinner	198,254	Dec. 18, 1877	586	177	12	1045
Cultivator and seeder combined	J. Bergey	186,979	Feb. 6, 1877	67	23	11	210
Cultivator and seeding-machine	C. O. Gardiner	198,372	Dec. 18, 1877	690	210	12	1061
Cultivator attachment	W. P. Hubbard and J. W. Robinson.	190,328	May 1, 1877	210	63	11	773
Cultivator-blade	J. H. Owen	194,531	Aug. 28, 1877	784	233	12	362
Cultivator, Corn	W. G. Barnes	193,912	Aug. 7, 1877	110	35	12	250
Cultivator-coupling	W. P. Brown	190,816	May 15, 1877	732	216	11	857
Cultivator, Double-winged	C. J. Cooper	197,100	Nov. 13, 1877	391	115	12	824
Cultivator, Fallow	J. Richardson	189,266	Apr. 3, 1877	233	78	11	590
Cultivator, Hand	J. W. Dowler	187,222	Feb. 13, 1877	304	99	11	356
Cultivator, Harrow	C. La Dow	187,392	Feb. 13, 1877	473	148	11	278
Cultivator, Harrow	A. Saur and J. Wilson	189,792	Apr. 17, 1877	800	246	11	679
Cultivator, Revolving	J. Graner	198,540	Dec. 25, 1877	866	264	12	1095
Cultivator, Revolving	G. Stovenson	186,634	Jan. 23, 1877	833	257	11	145
Cultivator, Riding	S. J. Hinkle	194,150	Aug. 14, 1877	387	115	12	292
Cultivator, Riding	J. H. Palm	194,366	Aug. 21, 1877	607	182	12	329
Cultivator, Rotary	C. C. Breeden and O. T. Wheeler	198,339	Dec. 18, 1877	655	199	12	1056
Cultivator safety hook and clamp	S. Peck	194,310	Aug. 21, 1877	553	166	12	322
Cultivator shovels, Attaching	R. Elwood	189,550	Apr. 17, 1877	555	173	11	647
Cultivator, Strawberry and vegetable	W. Pierce	190,247	May 1, 1877	130	39	11	763
Cultivator-teeth, Device for bracing	B. Town	193,735	July 31, 1877	1234	370	12	214
Cultivator-tooth	J. R. Colt	188,004	Mar. 6, 1877	47	13	11	387
Cultivator-tooth	M. Johnson	197,638	Nov. 27, 1877	966	287	12	925
Cultivator-tooth	G. D. Rowell	192,390	June 26, 1877	932	279	11	1127
Cultivator, Walking	J. Poetz	192,387	June 26, 1877	936	279	11	1127
Cultivator, weeder, and marker	M. N. Ward	194,504	Aug. 21, 1877	746	222	12	347
Cultivator, Wheel	S. Dahlborn	186,713	Jan. 30, 1877	913	283	11	166
Cultivator, Wheel	E. M. and M. L. Kissell	190,972	May 22, 1877	903	267	11	887
Cultivator, Wheel	I. Macy and J. C. Watkins	197,038	Nov. 13, 1877	320	95	12	814
Cultivator, Wheel	F. M. Needham	187,043	Feb. 6, 1877	121	40	11	219
Cup: *See* Billiard-chalk cup. Dental impression-cup. Faucet-drip cup. Oil and filter cup. Sheet-metal cup. Sponge-cup. Strainer-cup. Tallow-cup. Umbrella-tip cup.							
Cup	S. S. Newton	186,750	Jan. 30, 1877	945	293	11	171
Cup-cover	H. H. C. Arnold	187,799	Feb. 27, 1877	900	280	11	350
Cup-handles, Securing	C. S. S. Baron	190,537	May 8, 1877	439	129	11	811
Cupboard	W. H. Sallada	191,549	June 5, 1877	41	12	11	982
Cupola-furnace	V. Collian	197,605	Nov. 27, 1877	930	277	12	920
Cupola-furnace	U. B. Stribling	192,306	June 19, 1877	827	252	11	1102
Cupola-furnace and hot-blast oven combined	A. Wilson	191,213	May 22, 1877	1134	340	11	919
Curd cutter and agitator	M. B. Jackson	190,219	May 1, 1877	104	30	11	760
Curling-iron	C. Maggi	190,602	May 8, 1877	501	149	11	820
Current-wheel	W. J. Perkins	192,000	June 12, 1877	479	147	11	1044
Currier's knife	R. E. Cherrington	193,806	Aug. 7, 1877	10	4	12	236
Curry-comb	T. D. Bennett and H. B. Moody	191,559	June 5, 1877	49	14	11	983
Curry-comb	J. F. Clune	195,344	Sept. 18, 1877	612	180	12	502
Curry-comb	C. E. L. Holmes	185,920	Jan. 2, 1877	110	33	11	22
Curry-comb	C. E. L. Holmes	188,294	Mar. 13, 1877	336	105	11	431
Curry-comb	C. E. L. Holmes	194,821	Sept. 4, 1877	67	22	12	410
Curry-comb	C. A. Hotchkiss	192,918	July 10, 1877	382	113	12	72
Curry-comb	C. A. Hotchkiss	193,251	July 17, 1877	718	220	12	125

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Curry-comb	P. Miller	191,608	June 5, 1877	90	27	11	989
Curry-comb	J. N. Rundle	187,912	Feb. 27, 1877	1015	313	11	365
Curry-comb	M. Sweet	191,784	June 12, 1877	267	83	11	1018
Curry-comb	U. G. White	186,652	Jan. 23, 1877	849	262	11	148
Curtain-cord holder	A. S. Dickinson	196,567	Oct. 30, 1877	941	272	12	728
Curtain-cord tightener	E. C. Byam	192,974	July 10, 1877	433	130	12	80
Curtain, Fire-proof	W. D. Baker	186,657	Jan. 30, 1877	863	267	11	159
Curtain-fixture	H. Broom	190,544	May 8, 1877	446	132	11	812
Curtain-fixture	N. Campbell	188,280	Mar. 13, 1877	321	101	11	429
Curtain-fixture	J. Collins and J. D. Saltsgaver	186,198	Jan. 16, 1877	392	119	11	76
Curtain-fixture	T. Connelly and J. F. Bickoll	194,073	Aug. 14, 1877	292	87	12	281
Curtain-fixture	J. Dougherty	187,523	Feb. 20, 1877	617	191	11	304
Curtain-fixture	A. Fontayne	193,239	July 17, 1877	708	217	12	124
Curtain-fixture	A. H. Foster	188,883	Mar. 27, 1877	943	287	11	531
Curtain-fixture	C. A. Kellogg	187,469	Feb. 20, 1877	567	176	11	297
Curtain-fixture	A. H. Knapp	187,868	Feb. 27, 1877	968	300	11	359
Curtain-fixture	J. C. Lake	198,123	Dec. 11, 1877	421	131	12	1016
Curtain-fixture	J. B. Marsball	186,357	Jan. 16, 1877	553	168	11	96
Curtain-fixture	W. B. Noyes	194,458	Aug. 21, 1877	703	209	12	342
Curtain-fixture	W. W. Pickford	198,677	Dec. 25, 1877	999	304	12	1115
Curtain-fixture	H. T. Raeke	198,682	Dec. 25, 1877	1003	305	12	1115
Curtain-fixture	J. Reichert	196,768	Nov. 6, 1877	29	9	12	765
Curtain-fixture	H. E. Sawyer	192,019	June 12, 1877	500	153	11	1047
Curtain-fixture	H. Seehausen	187,422	Feb. 13, 1877	502	155	11	282
Curtain-fixture	W. C. Sharp	187,918	Feb. 27, 1877	1020	315	11	366
Curtain-fixture	A. B. Shaw	189,660	Apr. 17, 1877	665	206	11	661
Curtain-fixture	A. B. Shaw	189,798	Apr. 17, 1877	804	247	11	679
Curtain-fixture	J. H. Strothman	188,551	Mar. 20, 1877	597	184	11	476
Curtain-fixture	D. B. Tiffany	188,985	Mar. 27, 1877	1039	319	11	545
Curtain-fixture	D. S. Van Etten	194,793	Sept. 4, 1877	39	13	12	406
Curtain-fixture	J. L. Williams and A. Kerr	190,656	May 8, 1877	564	168	11	828
Curtain-fixture, Reversible	F. E. Wagner	197,234	Nov. 20, 1877	540	160	12	854
Curtain fixtures, Spring-balance for window	A. H. Knapp	187,867	Feb. 27, 1877	967	300	11	359
Curtain-roller	A. F. Temple	188,552	Mar. 20, 1877	598	184	11	476
Curtain roller and bracket	R. E. Abbott	196,737	Nov. 6, 1877	1	1	12	761
Curtain roller and bracket	E. F. McComas	192,077	June 19, 1877	584	177	11	1071
Curtain roller and bracket	H. Seehausen	196,994	Nov. 13, 1877	276	81	12	807
Curtain roller and bracket	H. C. Steinhoff	195,962	Oct. 9, 1877	285	80	12	609
Curtain-roller, Extension	T. Nowell	187,724	Feb. 27, 1877	825	257	11	341
Curtain roller or bracket	A. B. Shaw	195,729	Oct. 2, 1877	40	12	12	566
Curtain-tassel	S. H. La Rue	190,051	Apr. 24, 1877	1090	332	11	724
Curtain-tassel clamp	A. H. Knapp	195,763	Oct. 2, 1877	70	21	12	571
Curtain, Theater	C. Hoffmann	188,136	Mar. 6, 1877	168	51, 52	11	403
Cushion: (*See* Billiard-table cushion.)							
Cuspador	E. A. Heath	198,199	Dec. 18, 1877	517	159	12	1036
Cuspador for cars, &c	C. R. Burr and J. V. R. Towers	198,273	Dec. 18, 1877	603	182	12	1048
Cut-off	A. Ruthel	188,419	Mar. 13, 1877	462	143	11	449
Cut-off and filter, Combined	J. Hoover	192,696	July 3, 1877	148	41	12	33
Cut-off, Automatic water pipe pressure	F. McLoughlin	190,442	May 8, 1877	344	101	11	799
Cut-off for gas and water-pipes	F. Jarecki	190,868	May 15, 1877	760	231	11	864
Cut-off gear for steam-engines, Automatic	F. F. Hemenway	193,952	Aug. 7, 1877	151	46, 47	12	255
Cut-off or valve for pumps	J. Mansir	190,772	May 15, 1877	695	205	11	852
Cut-off valve	F. A. Bishop	190,408	May 8, 1877	311	91	11	795
Cut-off valve	T. Whittaker	196,847	Nov. 6, 1877	110	34	12	776
Cut-off valve for steam-engines, Variable	J. Fish	186,240	Jan. 16, 1877	426	131	11	81
Cut-off, Water	J. G. Diem	193,857	Aug. 7, 1877	55	18	12	242
Cutlery-blanks, Manufacture of	C. G. Hallas, F. W. Flower, and E. Pearson.	193,115	July 17, 1877	586	177	12	107
Cutlery-grinding machine	G. J. Capewell	196,333	Oct. 23, 1877	692	199	12	682
Cutlery-scourer	L. K. Dutton	188,786	Mar. 27, 1877	846	257	11	518
Cutlery-strop safe	A. E. Hively	195,604	Sept. 25, 1877	873	259	12	547
Cutter: *See* Apple-cutter. Bolt and rivet cutter. Bread-cutter. Brick-machine cutter. Brush and cane cutter. Bung-cutter. Butter-cutter. Button-hole cutter. Cake-cutter. Cheese-cutter. Cigar-cutter. Cigar-wrapper cutter. Corn-stalk cutter. Feed-cutter. Finger-nail cutter. Grass-cutter. Harvester-cutter. Ice-cutter. Lathe-cutter. Meat-cutter. Meat and vegetable cutter. Oat-meal cutter. Pipe-cutter. Pipe and bar cutter. Sewing-machine-thread cutter. Sod-cutter. Stalk-cutter. Straw-cutter. Thread-cutter. Tobacco-cutter. Vegetable-cutter. Weed-cutter. Wire-cutter.							
Cutter-head	M. T. Boult	188,771	Mar. 27, 1877	819	250	11	5 5
Cutter-head	J. Du Bois	192,242	June 19, 1877	752	230	11	1092
Cutter-head	O. Lindblad	189,865	Apr. 24, 1877	892	273	11	699
Cutter-head	J. W. C. McCurdy	193,769	July 31, 1877	1270	381	12	219
Cutter-head	C. R. Patterson	191,878	June 12, 1877	359	111	11	1029
Cutter-head	J. B. Stockham	195,180	Sept. 11, 1877	441	131	12	470
Cutter-head	L. R. Washburn and W. H. Walker.	188,221	Mar. 6, 1877	257	80	11	414
Cutter-head for grooving and channeling	F. S. Clarkson	194,221	Aug. 14, 1877	449	136	12	301
Cutting machine, Fabrics	D. P. Sargent	197,901	Dec. 4, 1877	194	59	12	973
Cylinder lubricator, Automatic steam	P. Bloomsburg	192,357	June 26, 1877	898	269	11	1123
Cylinder, steam-engine	H. F. Frisbie	198,099	Dec. 11, 1877	391	123	12	1012
Cylinders and rings, Device for fitting and polishing	M. H. McNair	189,483	Apr. 10, 1877	471	149	11	628

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D.							
Dam for storing and utilizing tide-power	W. H. Foster	188,348	Mar. 13, 1877	388	122	11	439
Damper and fine-strip, Stove	G. W. Herrick	197,632	Nov. 27, 1877	961	286	12	925
Damper, Antomatic	M. W. Bailey	186,518	Jan. 23, 1877	719	221	11	130
Damper, Chimney	T. Speed	187,565	Feb. 20, 1877	650	202	11	308
Damper regulator, Steam-boiler	D. C. Kellam	190,336	May 1, 1877	219	65	11	775
Damper, Stove-pipe	A. Brightman	191,646	June 5, 1877	127	39	11	993
Damper, Stope-pipe	S. Selden, M. Griswold, jr., and J. S. Crump.	188,418	Mar. 13, 1877	461	143	11	449
Damper, Stove-pipe	H. H. Stevens	187,196	Feb. 6, 1877	258	84	11	237
Damper, Stove-pipe	H. B. Todd	192,395	June 26, 1877	938	281	11	1128
Damper, Stove-pipe	N. C. Whitcomb	190,103	Apr. 24, 1877	1149	350	11	732
Dampers, heat and fire alarms, &c., Thermostatic device for controlling.	A. Brandriff and J. S. Simmerman.	198,185	Dec. 18, 1877	499	155	12	1034
Darning-last	M. B. Crowninshield	190,745	May 15, 1877	672	199	11	849
Dash-board	B. Burr	187,450	Feb. 20, 1877	548	169	11	295
Dash-board	G. H. Hutton	192,169	June 19, 1877	673	206	11	1082
Dead bodies, Preserving	T. Holmes	188,014	Mar. 6, 1877	57	16	11	388
Demijohn-case	C. Newman	192,182	June 19, 1877	685	210	11	1084
Demijohns, &c., Packing-case for	G. W. Peck	189,491	Apr. 10, 1877	480	152	11	629
Dental and barber's chair	G. W. Archer	188,329	Mar. 13, 1877	371	116	11	436
Dental bracket	C. H. Moseley	191,809	June 12, 1877	292	91	11	1020
Dental chair	S. S. White	187,573	Feb. 20, 1877	656	204	11	310
Dental drill	E. Osmond	193,456	July 24, 1877	939	285	12	164
Dental engine	G. W. Tripp	189,526	Apr. 10, 1877	509	161	11	633
Dental engine	B. M. Wilkerson	189,409	Apr. 10, 1877	403	128	11	619
Dental-engine hand-piece	E. T. Starr	194,850	Sept. 4, 1877	93	30	12	413
Dental-engine hand-piece	G. W. Tripp	193,300	July 17, 1877	773	237	12	132
Dental engines, Angle attachment for	E. T. Starr	186,504	Jan. 23, 1877	707	217	11	128
Dental engines, Tool-carrier for	J. W. Gilbert	186,471	Jan. 23, 1877	682	209	11	125
Dental engines, Tool-stock for	E. Tello	193,429	July 24, 1877	914	278	12	100
Dental-foil condenser	J. Hood and S. H. Reynolds	189,735	Apr. 17, 1877	742	228	11	671
Dental impression-cup	W. M. Reynolds	196,991	Nov. 13, 1877	274	81	12	807
Dental instruments, Case for	E. P. Brown	186,793	Jan. 30, 1877	992	308	11	176
Dental mallet. Pneomatic	S. W. Dennis	195,102	Sept. 11, 1877	359	109	12	458
Dental plates, Composition for molds for	H. D. Knight and W. M. Whiteside	196,300	Oct. 23, 1877	658		12	678
Dental plates, Stamping	C. F. Barnard	186,522	Jan. 23, 1877	723	222, 223	11	131
Dental plates, teeth, &c., Compound for the manufacture of porcelain adapted for.	A. B. Cady	192,149	June 19, 1877	655		11	1079
Dental plugger	R. B. Donaldson	192,746	July 3, 1877	185	54	12	38
Dental plugger	J. R. Finney	197,261	Nov. 20, 1877	564	167	12	858
Dental plugger	C. King	186,580	Jan. 23, 1877	783	241	11	139
Dental plugger	C. King	186,680	Jan. 30, 1877	882	273	11	162
Dental plugger	K. L. Mills	189,249	Apr. 3, 1877	218	73	11	587
Dental plugger, Electro-magnetic	J. E. Dexter	186,234	Jan. 16, 1877	421	129	11	80
Dental purposes, Machine for folding gold-foil for	R. S. Williams	186,914	Jan. 30, 1877	1113	344	11	192
Dental spittoon	W. M. Reynolds	197,977	Dec. 11, 1877	279	85	12	994
Dental tool	S. Babcock and C. E. Mason	190,115	May 1, 1877	2	1	11	747
Dental uses, Cotton-holder for	T. Cogswell	186,307	Jan. 16, 1877	485	149	11	88
Dentifrice	E. G. Ward	196,275	Oct. 16, 1877	622		12	663
Dentist's chair	E. Burritt	192,809	July 3, 1877	256	75	12	46
Dentist's chair	F. Peters	198,148	Dec. 11, 1877	444	139	12	1019
Dentist's chair	B. M. Wilkorson	197,441	Nov. 20, 1877	746	223	12	885
Deodorizing, disinfecting, and fertilizing compound.	H. Seligman	191,476	May 29, 1877	1391		11	961
Deodorizing fumigatory closet	A. Hand	187,270	Feb. 13, 1877	351	112	11	262
Deodorizing gases from rendering-tanks, Apparatus for.	C. J. Trotter	194,194	Aug. 14, 1877	427	129	12	298
Dermopathic instrument	C. B. Tucker	188,082	Mar. 6, 1877	117	35	11	396
Derrick, Portable	B. Jackson	186,574	Jan. 23, 1877	774	239	11	138
Derrick, Portable	M. F. Lyons	197,645	Nov. 27, 1877	972	289	12	926
Derrick-step	F. Locke	193,824	Aug. 7, 1877	29	9	12	238
Desk	J. F. Boye	197,452	Nov. 27, 1877	773	231	12	898
Desk	C. H. King	189,749	Apr. 17, 1877	758	232	11	673
Desk	D. L. Ransom	197,290	Nov. 20, 1877	593	175, 176	12	862
Desk	J. R. Richardson	191,369	May 29, 1877	1285	388	11	948
Desk	J. I. Stewart	191,893	June 12, 1877	373	115	11	1031
Desk	H. H. Wiggers	187,074	Feb. 6, 1877	149	49	11	223
Desk and chest of drawers combined	G. S. Sykes	187,429	Feb. 13, 1877	509	157, 158	11	282
Desk and crib combined	H. S. Hale	197,122	Nov. 13, 1877	411	121	12	827
Desk and seat heater	M. W. Chaso	198,351	Dec. 18, 1877	667	203, 204	12	1058
Desk and table combined	G. Blake	195,433	Sept. 18, 1877	499	207	12	515
Desk, Drawer	E. N. Doring	187,829	Feb. 27, 1877	932	289	11	354
Desk, &c., lock	W. Park	195,726	Oct. 2, 1877	36	11	12	566
Desk, School	W. B. Cogger and F. T. June	189,192	Apr. 3, 1877	158	55	11	580
Desk, School	E. G. Durant and T. Kane	192,641	July 3, 1877	90	26	12	24
Desk, School	H. H. Elbreg	191,846	June 12, 1877	330	102	11	1025
Desk, School	H. R. Fry	187,264	Feb. 13, 1877	346	110	11	261
Desk, School	J. Peard	190,896	May 15, 1877	805	238	11	867
Desk, School	C. H. Presbrey	191,713	June 5, 1877	189	60	11	1002
Desk, School	W. Walgrain, C. F. and K. Bnscall	192,957	July 10, 1877	419	126	12	78
Desk seat, School	E. Haynes	186,729	Jan. 30, 1877	927	287	11	168
Desk, wash-stand, and blacking-case combined	A. O. Kirkwood	189,942	Apr. 24, 1877	967	296	11	769
Desk, Writing	D. J. Stein	198,056	Dec. 11, 1877	350	109	12	1096
Desks, Folding seat for school	O. Davis	190,832	May 15, 1877	745	221	11	859
Detecter: *See* Coin-detecter. Time-detecter. Thief-detecter.							
Detergent compound	G. P. Cole	194,990	Sept. 11, 1877	245		12	441
Diamond-holder, Glazier's	J. S. Karelsen	188,058	Mar. 6, 1877	99	30	11	394
Dice-box	J. Wedesweiler	187,686	Feb. 20, 1877	765	237	11	324

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Die: *See* Leather-cutting die. Skelping-die. Screw-cutting die. Spoon-blank die.							
Die for forming articles of plastic materials	J. Bliss	196,420	Oct. 23, 1877	769	222	12	694
Digger: *See* Post-hole digger. Tree and post hole digger. Potato-digger.							
Digger and weeder	M. Johnson	192,697	July 3, 1877	148	41	12	33
Dish, Butter	A. C. Townsend	187,784	Feb. 27, 1877	886	276	11	348
Dish-cleaner, Steam	D. C. Buell	193,222	July 17, 1877	687	209, 210, 211	12	121
Dish-cleaning machine	J. S. and E. W. Letts	197,480	Nov. 27, 1877	799	238	12	902
Dish, Culinary	S. W. Mathewson	190,688	May 15, 1877	612	182	11	841
Dish, Grocer's	H. M. Wilcox, R. J. Percy, and J. F. Daggett.	194,280	Aug. 14, 1877	509	154	12	309
Dish-holder	H. C. Milligan	190,352	May 1, 1877	233	69	11	777
Dish, Pressed wooden	G. Gardner	196,005	Oct. 9, 1877	328	92	12	615
Dish-rack	W. F. Bowden and J. W. Stewart	192,560	July 3, 1877	4	2	12	13
Dish-stand	G. W. Pierce	187,481	Feb. 20, 1877	578	179	11	299
Dish-warmer	N. Clark	187,511	Feb. 20, 1877	606	188	11	302
Dish-warmer	J. H. Wright	189,412	Apr. 10, 1877	407	129	11	620
Dish-warmer	J. H. Wright	192,958	July 10, 1877	420	126	12	78
Dish-washer	J. J. Hoffman	193,249	July 17, 1877	717	219	12	125
Dish-washer	G. F. White	197,580	Nov. 27, 1877	904	269	12	916
Dish-washing apparatus	S. S. Watson and J. J. Scott	195,779	Oct. 2, 1877	82	25	12	573
Disinfecting compound	H. J. Bang	187,802	Feb. 27, 1877	903		11	350
Disintegrating cereals, Process and apparatus for	R. D'Henreuse	198,192	Dec. 18, 1877	509	157	12	1035
Distillation and apparatus therefor, Continuous	S. Van Syckel	191,203	May 22, 1877	1121	335, 336	11	918
Distillery slops, Apparatus for drying	A. Junker and F. W. Wolf	187,148	Feb. 6, 1877	217	71	11	232
Distilling-column	E. G. Starck	195,852	Oct. 2, 1877	161	45	12	583
Distilling petroleum, Apparatus for	H. C. Rose	195,652	Sept. 25, 1877	918	273	12	554
Ditcher	W. R. Peet	189,647	Apr. 17, 1877	646	201	11	659
Ditcher, Flue	W. W. Snyder	189,667	Apr. 17, 1877	671	207	11	662
Ditches, Apparatus for excavating	W. H. Minter	195,833	Oct. 2, 1877	138	40	12	580
Ditches, flumes, &c, Forming and lining	J. P. Culver	195,989	Oct. 9, 1877	312	87	12	612
Ditching and draining machine	A. Swift	190,096	Apr. 24, 1877	1138	346	11	731
Ditching and excavating machine	S. A. De Force	195,263	Sept. 18, 1877	542	157, 158	12	492
Ditching and tile-laying	T. G. Coil	188,778	Mar. 27, 1877	837	254	11	517
Ditching and tile-laying machine	R. E. Nevin	195,527	Sept. 25, 1877	801	237	12	537
Ditching-machine	S. P. Evans	189,440	Apr. 10, 1877	433	136	11	622
Ditching-machine	T. T. Fleener	189,350	Apr. 10, 1877	346	111	11	611
Ditching-machine	P. N. Fowler	196,346	Oct. 23, 1877	703	202	12	684
Ditching-machine	J. A. Grove	193,815	Aug. 7, 1877	18	6	12	237
Ditching-machine	D. Hess	186,006	Jan. 9, 1877	198	60	11	43
Ditching-machine	J. W. Humphreys	187,466	Feb. 20, 1877	562	174	11	297
Ditching-machine	G. W. Nevill	196,922	Nov. 6, 1877	194	56	12	787
Ditching-machine	A. Peterson	186,160	Jan. 9, 1877	341	104	11	62
Ditching-machine	J. H. Rauch	195,048	Sept. 11, 1877	306	93	12	449
Ditching-machine	J. R. Slaton and J. M. Wadlington	189,395	Apr. 10, 1877	391	124	11	618
Ditching-machine	T. N. and S. Turner	188,698	Mar. 20, 1877	739	227	11	495
Dividers and siding-hook combined	H. Sherman	193,898	Aug. 7, 1877	96	31	12	248
Doffer-combs, Mechanism for operating	E. R. Coverdill	190,744	May 15, 1877	672	199	11	849
Doffer-combs, Mechanism for operating	E. Wright	188,833	Mar. 27, 1877	892	272	11	525
Doll	K. C. Atwood	186,919	Feb. 6, 1877	2	1	11	203
Doll, Talking and crying	W. A. Harwood	189,935	Apr. 24, 1877	962	294	11	708
Doll's hat	C. L. Slade	193,674	July 31, 1877	1183	354	12	207
Doll's head	L. Reichmann	187,173	Feb. 6, 1877	240	78	11	2.5
Domestic boiler	H. Thompson	186,067	Jan. 9, 1877	257	77	11	51
Domino	E. Aldom	197,003	Nov. 13, 1877	284	84	12	808
Donkey engine and pump	J. Stannah	191,190	May 22, 1877	1108	331	11	916
Door-alarm	W. W. Climenson	192,861	July 10, 1877	331	98	12	65
Door and drawer plate	F. H. Seymour	192,533	June 26, 1877	1069	322	11	1145
Door and gate fastener	J. Gibbs	186,337	Jan. 16, 1877	532	161	11	93
Door-bolt	F. Davis	190,561	May 8, 1877	460	136	11	814
Door-bolt	A. A. Dennett	191,844	June 12, 1877	328	102	11	1025
Door-bolt	R. Eichmuller	189,438	Apr. 10, 1877	431	136	11	622
Door-bolt	J. Sargent	194,000	Aug. 7, 1877	200	60	12	251
Door-block, Pressed glass	W. Beck	187,246	Feb. 13, 1877	329	105	11	259
Door-check	J. Alexander	192,888	July 10, 1877	357	105	12	68
Door-check	J. B. Everest	189,927	Apr. 24, 1877	954	292	11	707
Door-check	J. Francis	193,154	July 17, 1877	616	187	12	112
Door-check	A. Kehl	197,863	Dec. 4, 1877	154	47	12	908
Door-check	D. E. and D. C. Peck	192,126	June 19, 1877	631	192	11	1076
Door-check	J. A. Traut and J. A. Maass	197,530	Nov. 20, 1877	856	255	12	910
Door-check	W. Von Auer	198,553	Dec. 25, 1877	876	267	12	1097
Door-check	I. J. Webber	190,939	May 15, 1877	852	252	11	873
Door-check	C. S. Whipple	189,822	Apr. 17, 1877	824	254	11	682
Door-check	C. S. Whipple	189,823	Apr. 17, 1877	825	255	11	682
Door-check	C. S. Whipple	189,824	Apr. 17, 1877	825	255	11	682
Door-check	C. S. Whipple	189,825	Apr. 17, 1877	826	255	11	682
Door-check	C. S. Whipple	197,577	Nov. 27, 1877	902	268	12	916
Door-fastening	C. R. Arnold	190,998	May 22, 1877	929	274	11	891
Door-fastening	E. Feige	195,595	Sept. 25, 1877	866	257	12	546
Door-fastening	G. A. Varney	197,695	Nov. 27, 1877	1030	308	12	933
Door, gate, &c., hanger	E. Prescott	196,990	Nov. 13, 1877	272	80	12	806
Door-hanger	T. J. Jones	194,874	Sept. 4, 1877	116	36	12	417
Door-hanger	W. E. Warner	186,388	Jan. 16, 1877	591	181	11	100
Door hanger, Barn	J. H. Lawrence	188,521	Mar. 20, 1877	573	177	11	472
Door-lock	T. F. Keating and W. H. Taylor	191,861	June 12, 1877	344	106	11	1027
Door-lock	E. Wike	192,724	July 3, 1877	167	48	12	36
Door lock, Barn	I. Frees	197,115	Nov. 13, 1877	405	119	12	826

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Door lock, Cell	G. Ropes	190,374	May 1,1877	254	76	11	779
Door lock, Cell	J. Sargent	188,962	Mar. 27,1877	1020	313 314	11	542
Door lock, Cell	J. Sargent	190,627	May 8,1877	530	158	11	824
Door lock, Prison	J. A. Quesuel	186,060	Jan. 9,1877	251	76	11	50
Door lock, Sliding	W. C. Rogers	189,061	Apr. 3,1877	47	17	11	565
Door lock, Sliding	R. W. Semple	187,735	Feb. 27,1877	838	261	11	342
Door lock, &c., Sliding	J. W. Schoonmaker	189,392	Apr. 10,1877	388	224	11	617
Door-plate	W. Tracy	188,207	Mar. 6,1877	245	77	11	412
Door-retainer	R. E. Dietz	186,319	Jan. 16,1877	498	152	11	90
Door-securer	G. E. Kerlicks	196,810	Nov. 6,1877	74	22	12	771
Door-securer	A. Vœge	197,187	Nov. 13,1877	475	140	12	837
Door-sheave	S. H. and E. G. Moore	188,170	Mar. 6,1877	203	63	11	407
Door-sill	A. Saur	187,419	Feb. 13,1877	500	155	11	281
Door-sill	S. M. Stewart	196,715	Oct. 30,1877	1081	314	12	748
Door, Sliding	A. McQuatters	195,148	Sept. 11,1877	404	121	12	465
Door-spring	Z. and H. B. Cobb	194,511	Aug. 28,1877	766	227	12	359
Door-spring	G. S. Knapp	196,095	Oct. 16,1877	433	126	12	638
Door-spring	L. P. Sherman	192,602	July 3,1877	46	13	12	18
Door-spring	A. A. Stimson and C. T. Sabin	187,678	Feb. 20,1877	759	235	11	323
Door-spring	G. E. Sutphen	187,738	Feb. 27,1877	840	261	11	342
Door-spring	A. P. Yates	193,681	July 31,1877	1190	356	12	207
Door-spring	F. Zieseniss	195,242	Sept. 18,1877	521	152	12	489
Door-stop screw	O. Mongeau	190,776	May 15,1877	698	206	11	853
Door, Threshold	R. B. Hamor	192,432	June 26,1877	968	290	11	1132
Doors, Anti-friction roller for sliding	A. A. Freeman	193,647	July 31,1877	1155	346	12	293
Doors, Device for closing	I. S. Doten	188,728	Mar. 27,1877	777	239	11	509
Doors, Device for operating	S. S. Spear	194,058	Aug. 14,1877	277	82	12	279
Doors, Handle and catch combined for sliding	W. C. Folant	189,628	Apr. 3,1877	18	6	11	561
Doors, Roller for sliding	A. K. Rider	192,455	June 26,1877	988	297	11	1135
Door, &c., Spring-bolt or catch for sliding	A. Hance	186,341	Jan. 16,1877	536	162	11	94
Double-acting press	L. Prahar	187,311	Feb. 13,1877	395	125	11	368
Douche	G. M. Smyser	196,050	Oct. 9,1877	373	106	12	621
Dough-kneader	E. Staples	158,978	Jan. 2,1877	164	50	11	30
Dough-kneading machine	E. L. Edwards	186,717	Jan. 30,1877	917	284	11	166
Dough-mixer	E. W. Jones	195,019	Sept. 11,1877	275	84	12	445
Dough-raiser	J. W. Martin	191,986	June 12,1877	467	144	11	1043
Dovetailing and grooving machine	J. Dill	197,835	Dec. 4,1877	130	39	12	964
Draft attachment for plows, cultivators, &c	T. W. Lerch	196,756	Nov. 6,1877	21	6	12	763
Draft attachment, Wagon	M. Turley	197,065	Nov. 13,1877	347	102	12	818
Draft attachment, Wagon	C. F. and E. E. Whipple	197,986	Dec. 11,1877	287	88	12	996
Draft-equalizer	T. R. Cook	194,075	Aug. 14,1877	294	88	12	281
Draft-equalizer	J. M. Forney	190,302	May 1,1877	186	56	11	770
Draft-equalizer	A. B. Fowler and I. H. Flagg	188,618	Mar. 20,1877	656	203	11	485
Draft-equalizer	L. W. Frederick	191,041	May 22,1877	971	288	11	897
Draft-equalizer	G. W. Harrington	186,558	Jan. 23,1877	760	233	11	136
Draft-equalizer	R. Hoadley	193,513	July 24,1877	995	301	12	171
Draft-equalizer	H. L. Phelps	188,666	Mar. 20,1877	710	217	11	492
Draft-equalizer	S. H. Pierce	187,309	Feb. 13,1877	394	125	11	368
Draft-equalizer	A. K. Williams	195,735	Oct. 2,1877	47	14	12	567
Draft-link, Elastic	W. G. Le Duc	194,448	Aug. 21,1877	692	206	12	340
Draft-regulator	T. Baker	190,181	May 1,1877	71	20	11	755
Draft regulator, Chimney	W. H. Sears	191,722	June 5,1877	197	62	11	1003
Draft-regulator for steam-boilers, &c., Automatic	A. C. Norcross	190,354	May 1,1877	235	70	11	777
Draft-rod for tenders	W. R. Cross	191,227	May 29,1877	1165	349	11	932
Drafting apparatus for ladies' dresses	C. H. Griffin	195,926	Oct. 9,1877	248	70	12	604
Draftsman's instrument	A. Langerfeld	187,871	Feb. 27,1877	971	301	11	359
Drain	G. C. Mesler	191,876	June 12,1877	358	110	11	1028
Drain-tile, Laying	C. B. Kline	188,149	Mar. 6,1877	181	55	11	404
Draw-heads, Former for making follower-plates for	J. Green	190,315	May 1,1877	199	59	11	772
Draw-heads, Manufacture of	A. P. Lindsay	197,872	Dec. 4,1877	164	50	12	969
Draw-knife	A. E. Brockett	192,895	July 10,1877	361	107	12	69
Drawer, &c., lock	G. W. Baker	186,192	Jan. 16,1877	387	118	11	75
Drawer, &c., lock	F. Egge and F. W. Smith	190,297	May 1,1877	182	55	11	769
Drawer-lock	G. B. Cowles	197,965	Dec. 11,1877	270	82	12	993
Drawer-lock	E. L. Perkins	197,975	Dec. 11,1877	278	85	12	994
Drawer-lock	W. H. Taylor	197,683	Nov. 27,1877	1003	300	12	931
Drawer-lock	W. H. Taylor	197,910	Dec. 4,1877	204	61	12	975
Drawer-pull	D. J. and W. A. Clark	196,193	Oct. 16,1877	534	155	12	652
Drawer-pull	L. Muller	188,751	Mar. 27,1877	801	245	11	513
Drawer-pull	G. W. Tucker	190,527	May 8,1877	428	125	11	810
Drawer-pull	G. W. Tucker	196,666	Oct. 30,1877	973	283	12	733
Drawer-pull	L. P. Whiteman and B. M. Gerardin.	188,762	Mar. 27,1877	811	248	11	514
Drawer-pull	W. A. Wright	193,587	July 24,1877	1069	320	12	180
Drawers	A. Packscher	188,940	Mar. 27,1877	994	305	11	539
Drawers	G. W. Walgrove	187,332	Feb. 13,1877	418	131	11	271
Drawers, Men's	H. Borkhim	196,780	Nov. 6,1877	41	13	12	766
Drawers Suspensory	M. Krickl	198,516	Dec. 25,1877	845	257	12	1092
Drawing-board	T. Bergner	195,915	Oct. 9,1877	233	67	12	602
Drawing-frame stop-motion	J. B. Clarke	192,682	July 3,1877	136	38	12	30
Drawing-frame stop-motion	H. S. Houghton	198,111	Dec. 11,1877	407	127	12	1014
Drawing-frame stop-motion	H. S. Honghton	198,112	Dec. 11,1877	408	127	12	1014
Drawing-frames, &c., Electric stop-motion for	J. Bullough	190,127	May 1,1877	15	4	11	748
Drawing instrument	J. R. Peel	191,611	June 5,1877	93	28, 29	11	989
Drawing-knife	S. Bedford	197,317	Nov. 20,1877	620	183	12	866
Dredge-bucket	J. McSpirit	193,172	July 17,1877	634	192	12	114
Dredging	W. B. Hyde	188,369	Mar. 13,1877	413	128 129	11	442
Dredging apparatus	J. B. Eads	196,645	Oct. 30,1877	1017	295	12	739
Dredging-bucket	W. A. Collins	194,651	Aug. 28,1877	885	264	12	377
Dredging-bucket	J. B. Curtis	188,105	Mar. 6,1877	136	41	11	399
Dredging-bucket	A. E. Hall	187,605	Feb. 6,1877	88	30	11	214
Dredging-bucket	G. Lord	197,384	Nov. 20,1877	687	206	12	877

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Dredging-bucket	J. McKeever	194,163	Aug. 14, 1877	401	119	12	294
Dredging-machine	T. Z. Cole	186,113	Jan. 9, 1877	298	90	11	56
Dredging-machine	C. O. and F. Davis	194,334	Aug. 21, 1877	579	173	12	325
Dredging-machine	E. F. Dennison	196,565	Oct. 30, 1877	938	271	12	728
Dredging-machine	F. E. Duckham	186,994	Feb. 6, 1877	80	27	11	212
Dredging-machine	R. R. Osgood	196,378	Oct. 23, 1877	735	212	12	688
Dredging-machine	J. W. Philbrick	189,650	Apr. 17, 1877	649	202	11	660
Dredging-machine, Hydraulic	J. B. Eads	196,646	Oct. 30, 1877	1017	295	12	739
Dredging-tube, Pneumatic	W. P. Lewis	192,440	June 26, 1877	976	293	11	1134
Dredging-tube, Pneumatic	W. P. Lewis	195,293	Sept. 18, 1877	569	165	12	496
Dress-elevator	E. C. Calm	197,015	Nov. 13, 1877	295	87	12	810
Dress-elevator	G. Havell	196,664	Oct. 30, 1877	1032	300	12	741
Dress-pattern chart	J. Wuerfel	196,615	Oct. 30, 1877	980	285	12	735
Dress-train supporter	M. Rosenstock	196,481	Oct. 23, 1877	833	240	12	702
Dress-train supporter	G. Schwab	192,532	June 26, 1877	1069	322	11	1145
Drier:							
See Clothes-drier. Malt and grain drier.							
Fruit-drier. Sand-drier.							
Hop-drier. Wool-drier.							
Lumber-drier.							
Drier	H. D. Ostermeor	191,997	June 12, 1877	476	147	11	1044
Drier	W. Pickhardt	190,616	May 8, 1877	516	153	11	822
Drier and smoke-house combined	R. Sabin	188,074	Mar. 6, 1877	112	34	11	396
Drill:							
See Bench-drill. Miner's drill.							
Corn-drill. Mining-drill.							
Dental drill. Potato-drill.							
Grain-drill. Ratchet-drill.							
Grain or seed drill. Rock-drill.							
Hand-drill. Seed-drill.							
Manure-drill. Twist-drill.							
Drill-bit	M. John	190,332	May 1, 1877	216	64	11	774
Drill for socket-coupling	W. H. Dailey	195,100	Sept. 11, 1877	358	108	12	457
Drill-hoe	E. F. Pryor	191,714	June 5, 1877	190	60	11	1002
Drill-jar	F. E. Quinn	186,617	Jan. 23, 1877	819	253	11	143
Drill, reamer, and tap combined	C. Petersen and E. Dunnebake	188,405	Mar. 13, 1877	450	139	11	447
Drill-rod grappling-hook	T. Johnson and H. Harson	195,612	Sept. 25, 1877	880	261	12	548
Drilling machine, Metal	M. L. Edwards	195,993	Oct. 9, 1877	315	88, 89	12	613
Drilling-machines, Work-holding device for	A. Hurd	190,042	Apr. 24, 1877	1077	328	11	723
Drilling mechanism	O. S. Hosmer	189,895	Apr. 24, 1877	925	282	11	703
Drinking-glass	C. B. Braunstein	195,337	Sept. 18, 1877	607	178	12	501
Drop-light	C. Henry	187,380	Feb. 13, 1877	462	145	11	277
Drop-light	C. Henry	192,994	July 10, 1877	450	136	12	82
Drop-light, Gas	W. B. S. Taylor	195,054	Sept. 11, 1877	310	94	12	450
Drop-light, Portable	C. L. Wallace	187,683	Feb. 20, 1877	763	237	11	323
Dropper:							
See Corn-dropper. Seed-dropper.							
Harvestor-dropper.							
Drum and cooking apparatus, Combined steam	H. Tillack	195,419	Sept. 18, 1877	683	202	12	513
Drum and stove combined	L. R. Heuchens	193,335	July 24, 1877	825	253	12	148
Drum, Stove-pipe	J. Closs	191,834	June 12, 1877	320	99	11	1024
Drum, Stove-pipe	M. P. Farnham	191,590	Aug. 28, 1877	834	248	12	369
Dry-goods, Machine for rolling	J. K. Somes	194,114	Aug. 14, 1877	351	105	12	287
Dry-goods stand, Revolving	J. Danner	197,925	Dec. 11, 1877	227	69	12	987
Drying and cooling apparatus	C. H. Hersey	189,625	Apr. 17, 1877	629	195	11	657
Drying apparatus for fertilizers, &c	A. P. Meylert	195,034	Sept. 11, 1877	288	88	12	447
Drying-cylinder	C. C. Butterworth	190,548	May 8, 1877	450	133	11	813
Drying fruit, smoking meat, &c., Apparatus for	B. J. Tayman	197,297	Nov. 20, 1877	598	177, 178	12	863
Drying-machines, Driving mechanism for	R. J. Walker	192,397	June 26, 1877	940	282	11	1128
Dumb-waiter	J. Murtaugh	195,526	Sept. 25, 1877	801	237	12	537
Dust-pan	I. S. Lauback	190,499	May 8, 1877	405	118	11	807
Dust-pan	S. M. Rennie	191,368	May 29, 1877	1285	388	11	948
Duster, Feather	J. W. Little	195,873	Oct. 2, 1877	181	51, 52	12	587
Dyeing and coloring feathers, laces, &c	J. Williams	194,392	Aug. 21, 1877	629		12	332
Dyeing and printing, Obtaining coloring matter suitable for.	H. Caro	186,032	Jan. 2, 1877	222		11	46
Dyeing silks	J. Rau	186,620	Jan. 23, 1877	821		11	144
Dyeing yarn and fabrics in aniline black	W. J. S. Grawitz	193,158	July 17, 1877	620		12	113
Dyes from naphthaline, Making	J. Wolff and R. Botley	188,217	Mar. 6, 1877	253		11	413
Dyes, Preparing aniline	L. Leigh	186,485	Jan. 23, 1877	693	212	11	126
Dynamometer	J. Blackinton	187,088	Feb 6, 1877	163	54	11	225
Dynamometer	H. Killiches	186,010	Jan. 9, 1877	201	61	11	44
Dynamometer	A. F. Nagle	195,837	Oct. 2, 1877	142	41	12	581
E.							
Ear-ring	L. A. Wood	188,323	Mar. 13, 1877	366	115	11	435
Ear-slipper	I. B. Kleinert	190,720	May 15, 1877	650	193	11	846
Earth-closet	L. Altemus	186,446	Jan. 23, 1877	661	202	11	122
Earth-closet	A. W. Thompson	187,991	Mar. 6, 1877	36	9	11	385
Earth-closet	E. W. Thompson	192,096	June 19, 1877	600	183	11	1073
Earth-pulverizer	W. H. McClanahan	185,940	Jan. 2, 1877	132	39	11	25
Earth's axial rotation, Apparatus for illustrating the.	C. Mancel	196,239	Oct. 16, 1877	582	168	12	658
Earthenware vessels, Making	T. Johnson	197,861	Dec. 4, 1877	153	46	12	967
Earthenware vessels, Manufacture of	M. J. Housel	197,853	Dec. 4, 1877	145	44	12	966
Earthenware vessels, Manufacture of	R. H. Kent and J. A. Baldwin	197,864	Dec. 4, 1877	155	47	12	968
Easel	T. L. Fisher	191,577	June 5, 1877	63	19	11	985
Easel	F. S. Frost	191,579	June 5, 1877	64	19	11	985
Easel for pottery decoration	W. H. Brownell	197,761	Dec. 4, 1877	58	19	12	954
Easel, Portfolio	D. J. Stein	192,303	June 19, 1877	825	251	11	1101

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Easel, Table	C. Fisher	189,617	Apr. 17, 1877	623	192, 193	11	656
Easy-chair	H. Parker	186,156	Jan. 9, 1877	336	103	11	62
Easy-chair	G. A. Waterhouse	195,468	Sept. 25, 1877	746	220	12	529
Eave-trough	J. F. Biegelaar	186,529	Jan. 23, 1877	731	225	11	132
Eave-trough	P. Snyder	190,382	May 1, 1877	264	78	11	780
Eave-trough	F. A. Walker	193,626	July 31, 1877	1129	338	12	200
Eave-trough cover	J. R. Creighton	189,431	Apr. 10, 1877	425	134	11	622
Eave-trough fastener	A. J. Gilbert	189,094	Apr. 3, 1877	72	26	11	569
Eave-trough hanger	C. T. Metzner	194,611	Aug. 28, 1877	853	254	12	372
Eave-trough hanger	F. Rahte	187,671	Feb. 20, 1877	753	233	11	322
Eave-trough machine	W. J. Barber	195,914	Oct. 9, 1877	233	66	12	602
Eave-troughs, Machine for making wooden	W. H. Nudd	186,944	Feb. 6, 1877	31	12	11	206
Eccentric power	R. Gidley	194,669	Aug. 28, 1877	903	269	12	379
Eccentric, Reversible	G. G. Lafayette and P. W. Strong	191,602	June 5, 1877	85	26	11	988
Eccentrics, Securing and adjusting	J. Mason	191,453	May 29, 1877	1370	413	11	959
Edger, Gang	D. Evans and W. Snyder	190,840	May 15, 1877	752	223	11	860
Educational appliance	C. E. Martin	196,532	Oct. 30, 1877	905	262	12	723
Egg-beater	T. Borcher	195,695	Oct. 2, 1877	3	1	12	561
Egg-beater	E. R. Dulje	192,157	June 19, 1877	665	203	11	1081
Egg-beater	L. Eberhart	193,493	July 24, 1877	975	295	12	169
Egg-beater	J. F. Monroe	190,238	May 1, 1877	121	36	11	762
Egg-beater	M. C. Russell	187,417	Feb. 13, 1877	498	154	11	281
Egg-beater	J. H. Scofield	190,628	May 8, 1877	532	158	11	824
Egg-beater	G. P. Sisson	186,278	Jan. 16, 1877	459	141	11	85
Egg-boiler, Automatic	O. Smith	192,946	July 10, 1877	407	122	12	76
Egg-box fastener	O. A. Stempel	187,195	Feb. 6, 1877	257	84	11	237
Egg-carrier	S. P. Hodgen	194,240	Aug. 14, 1877	469	142	12	304
Egg-carrier	M. A. Howell, jr	194,914	Sept. 4, 1877	156	49	12	422
Egg-carrier	L. Inglee	186,253	Jan. 16, 1877	437	134	11	82
Egg-carrier	W. J. H. Kappe	189,230	Apr. 3, 1877	195	66	11	585
Egg-carrier	G. D. Willis	187,952	Feb. 27, 1877	1051	324	11	370
Egg-carrier blanks, Machine for cutting out paste-board.	A. Chase	191,112	May 22, 1877	1036	310	11	906
Egg-crate	W. J. H. Kappe	190,440	May 8, 1877	343	100	11	799
Egg-fork	G. H. Hunting	197,135	Nov. 13, 1877	423	125	12	829
Egg-holder	P. M. Leprohon	187,872	Feb. 27, 1877	972	301	11	359
Egg-holder	C. Moeller	187,641	Feb. 6, 1877	119	39	11	219
Egg-holder	R. B. Smith	187,186	Feb. 6, 1877	250	82	11	236
Egg, Nest	D. M. Livingston	193,823	Aug. 7, 1877	29	9	12	238
Egg-poaching utensil	E. C. Townsend and A. Washburne.	186,901	Jan. 30, 1877	1099	340	11	190
Egg-tester	W. W. Dunbar	194,505	Aug. 21, 1877	747	223	12	348
Egg-tester	D. R. McCutchen	187,475	Feb. 20, 1877	572	177	11	298
Eggs, Apparatus for desiccating	W. O. Stoddard and H. Flint	190,927	May 15, 1877	837	248	11	871
Eggs, Desiccating	W. O. Stoddard	190,640	May 8, 1877	545	162	11	826
Eggs for transportation, Packing	O. A. Stempel	195,179	Sept. 11, 1877	440	131	12	470
Ejector, Steam	F. Steele	196,053	Oct. 9, 1877	375	107	12	622
Elastic fabric for suspenders, &c	W. Lapworth	196,980	Nov. 13, 1877	260	77	12	805
Elastic fabric, Manufacture of	M. E. Bowra	196,871	Nov. 6, 1877	142	43	12	780
Electric bath, Pneumo	W. D. Huffman and S. W. Huff	191,432	May 29, 1877	1345	407, 408	11	956
Electric circuits, Multiple circuit-closer for	J. H. Striedinger and A. Doerflinger.	185,841	Jan. 2, 1877	27	9	11	12
Electric engineering and lightning apparatus and system.	W. E. Sawyer	194,111	Aug. 14, 1877	348	104	12	187
Electric light	N. E. Reynier	191,177	May 22, 1877	1097	328	11	914
Electric light	W. Wallace	198,436	Dec. 18, 1877	752	227	12	1070
Electric lights, Carbon for	P. Jablochkoff	190,864	May 15, 1877	776	230	11	863
Electric lighting apparatus	W. E. Sawyer	194,563	Aug. 28, 1877	812	242	12	366
Electric machine, Dynamo	D. F. J. Lontin	189,116	Apr. 3, 1877	92	33	11	571
Electric motor	D. Ward	186,642	Jan. 23, 1877	839	259, 260	11	146
Electrical apparatus to indicate overstrain or weakness in roofs, bridges, &c.	J. Forbes	192,909	July 10, 1877	374	111	12	71
Electrical bath-tubs, Electrode for	G. M. Schweig	192,601	July 3, 1877	45	13	12	18
Electrical engineering and lighting system	W. E. Sawyer	196,834	Nov. 6, 1877	96	30	12	774
Electrical illuminating points, Metal-plated carbons for.	C. F. Brush	196,425	Oct. 23, 1877	773	223	12	694
Electrical semiphore	U. Juston	194,777	Sept. 4, 1877	23	6, 7, 8	12	403
Electro-magnet armature	H. Stroh	189,584	Apr. 17, 1877	593	183	11	652
Electro-magnetic engine	M. Egger	189,714	Apr. 17, 1877	717	221	11	668
Electro-magnetic engine	W. E. Sawyer	194,781	June 12, 1877	263	82	11	1017
Electro-magnetic engine commutator	W. E. Sawyer	195,174	Sept. 11, 1877	436	130	12	469
Electro-magnetic motor	W. W. Gary	190,206	May 1, 1877	92	27	11	758
Electro-magnetic motor	A. Shedlock	193,385	July 24, 1877	872	267	12	154
Electro-magnetic motor	R. J. Sheehy	191,478	May 29, 1877	1395	420	11	962
Electro-plate molds, Producing	W. B. Closson	195,443	Sept. 25, 1877	720	213	12	526
Electro-therapeutic belt	J. Hobbs	194,520	Aug. 28, 1877	774	230	12	360
Electro-vapor bath	C. S. Powers	198,152	Dec. 11, 1877	448	140	12	1020
Electroplating, Compound switch in dynamo-electric machine employed in.	E. Weston and E. E. Quimby	196,846	Nov. 6, 1877	108	33	12	776
Electroplating-frame	J. W. Rogers	197,408	Nov. 20, 1877	713	213	12	881
Elevating earth, Device for	G. E. Milliken	190,234	May 1, 1877	117	34	11	761
Elevating liquids, Apparatus for	T. Hanson	191,049	May 22, 1877	978	290, 291	11	897
Elevator: *See* Building-elevator. Coal-elevator. Dress-elevator. Endless-chain elevator. Goods and passenger elevator. Grain-elevator. Harvester-elevator. Hay-elevator. Hydraulic elevator. Ice-elevator. Spring elevator. Stump-elevator. Telescopic or hydraulic elevator. Water-elevator.							

Alphabetical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Elevator	D. S. Bailey	196,107	Oct. 16, 1877	448	130	12	640
Elevator	W. W. Blakeslee	189,914	Apr. 24, 1877	941	287 288	11	705
Elevator	S. E. Chubbuck	185,895	Jan. 2, 1877	82	25	11	18
Elevator	S. Levi	187,647	Feb. 20, 1877	734	227	11	319
Elevator	B. G. Martin	188,388	Mar. 13, 1877	435	135	11	445
Elevator-brake	W. F. Healy and J. Beggs	195,124	Sept. 11, 1877	383	115	12	46
Elevator-bucket	F. C. Barber	188,565	Mar. 20, 1877	609	189	11	478
Elevator-bucket	E. Johnson	197,140	Nov. 13, 1877	427	126	12	830
Elevator-cup	O. C. Stafford	196,496	Oct. 23, 1877	851	244	12	704
Elevator-damper	H. S. Lansdell	192,517	June 26, 1877	1054	317	11	1143
Elevator-hatchway door	D. P. Van Cott	196,317	Oct. 23, 1877	676	195	12	680
Elevator-indicator	T. S. Young	190,111	Apr. 24, 1877	1154	351	11	733
Elevator safety-check	N. H. Fogg	186,241	Jan. 16, 1877	427	131	11	81
Elevator-stop, Automatic	J. Beggs	194,546	Aug. 28, 1877	797	237	12	364
Elevator-way	A. J. Judge	192,335	June 26, 1877	876	264	11	1120
Elevators, Counterbalance for	H. R. Plimpton	195,305	Sept. 18, 1877	579	169	12	497
Elliptic spring	A. French	193,080	July 17, 1877	541	164	12	102
Elliptic spring	N. J. Tilghman	191,731	June 5, 1877	205	64	11	1004
Elliptic springs, Machine for setting	J. S. Pessenger	186,159	Jan. 9, 1877	338	104	11	62
Elliptic springs, Manufacture of	A. French	186,999	Feb. 6, 1877	83	28	11	213
Embossing-machine for wearing-apparel	J. Steinlein and G. Wright	197,181	Nov. 13, 1877	467	138	12	836
Embossing-press	D. Koenig	190,148	May 1, 1877	36	11	11	151
Embroidering-machine	I. L. G. Rice	186,953	Feb. 6, 1877	39	14, 15	11	207
Embroidery-pattern	A. Komp	191,978	June 12, 1877	459	142	11	1042
Embroidery-pattern card	T. E. Parker	196,308	Oct. 23, 1877	667	193	12	679
Emery grinding-wheel	I. P. Brown, jr., and A. A. Sanborn	187,593	Feb. 20, 1877	677	211	11	312
Emery-paste, Composition	B. L. Budd	190,125	May 1, 1877	14		11	748
Emery-wheel	W. Esty	192,058	June 19, 1877	565		11	1068
Emery-wheel	W. Esty	196,345	Oct. 23, 1877	702	202	12	684
Emery-wheels, Kiln for baking	W. Esty	192,059	June 19, 1877	566	172	11	1068
Emery-wheels, Protecting	W. W. White	193,306	July 17, 1877	778	238 239	12	133
Enameling sheet-iron ware	W. F. Niedringhaus	193,669	July 31, 1877	1179		12	206
End-boards, Wagon	T. Stevens	190,791	May 15, 1877	710	210	11	854
End-gate catch, Wagon	F. A. Havens	192,989	July 10, 1877	446	134	12	81
End-gate rod, Vehicle	W. G. Collins	194,295	Aug. 21, 1877	538	163	12	320
End-gate rod, Wagon	J. Genzly	192,753	July 3, 1877	193	55	12	39
End gate, Wagon	T. L. Block	186,226	Jan. 16, 1877	415	127	11	79
End gate, Wagon	S. D. Davis	190,290	May 1, 1877	176	53	11	769
End gate, Wagon	J. M. and J. H. King	197,783	Dec. 4, 1877	80	25	12	957
End gate, Wagon	E. Rowland	192,351	June 26, 1877	892	268	11	1122
Endless-track wheel	J. T. Brooks	196,331	Oct. 23, 1877	689	198	12	682
Engine: *See* Adjustable engine. Atmospheric gas-engine. Caloric-engine. Car-engine. Carding-engine. Compound engine. Dental engine. Donkey-engine. Electro-magnetic engine. Fire-engine. Gas-engine. Gas-motor engine. High and low pressure engine. High-pressure engine. Hot-air engine. Hydraulic engine. Locomotive-engine. Nigger-engine. Oscillating steam-engine. Paper-pulp engine. Pneumatic engine. Portable engine. Portable and traction engine. Pulp-engine. Pumping-engine. Rag-engine. Reciprocating engine. Road-engine. Rock-drilling engine. Rotary engine. Rotary steam-engine. Steam-engine. Traction-engine. Vertical portable engine.							
Engine	D. Stanton	198,427	Dec. 18, 1877	745	225	12	1069
Engine-frame	S. W. Putnam	191,716	June 5, 1877	192	60	11	1002
Engine-gearing	H. Stibbs	188,690	Mar. 20, 1877	731	224	11	494
Engine-shafts, Device for lining	L. H. Hall	188,048	Mar. 6, 1877	92	27	11	393
Engraved plates, Device for wiping and polishing	R. Neale	189,377	Apr. 10, 1877	370	119	11	615
Engravers' routing-machine	V. and J. Royle, jr	193,555	July 24, 1877	1040	311	12	177
Engraving-machine	A. E. Ellinwood	192,907	July 10, 1877	371	110	12	71
Engraving-machine	C. H. Field	192,247	June 19, 1877	757	232	11	1093
Engraving-machine table	A. E. Ellinwood	190,750	May 15, 1877	677	200	11	850
Envelope	R. C. Carpenter	189,189	Apr. 3, 1877	156	54	11	580
Envelope	A. Christey	192,363	June 26, 1877	905	271	11	1124
Envelope	A. C. Fox	191,419	May 29, 1877	1330	404	11	954
Envelope	L. Harsh	198,296	Dec. 18, 1877	621	188	12	1051
Envelope	J. J. Hayden	187,379	Feb. 13, 1877	461	145	11	276
Envelope	W. S. Holding	190,588	May 8, 1877	486	145	11	818
Envelope	C. K. Marshall	192,522	June 26, 1877	1059	319	11	1144
Envelope	J. E. Marshall	188,299	Mar. 13, 1877	341	107	11	432
Envelope	L. H. Rogers	188,306	Mar. 13, 1877	346	109	11	433
Envelope	J. A. Simonson	190,630	May 8, 1877	533	158	11	824
Envelope-opener	J. Salter	194,728	Aug. 28, 1877	660	285	12	387
Envelope-opening machine	A. B. See	195,407	Sept. 18, 1877	673	199	12	511
Equalizer, Three-horse	E. B. Decker	189,435	Apr. 10, 1877	429	135	11	622
Equalizer, Three-horse	W. McClelland	191,245	May 29, 1877	1181	354	11	934
Equalizer, Three-horse	J. Pratt, jr	190,364	May 1, 1877	244	72	11	778
Eraser and pencil, Combined	P. Schrag	186,885	Jan. 30, 1877	1086	336	11	188
Erasive tip and pencil-point protector, Combined	G. W. McGill	188,653	Mar. 20, 1877	697	214	11	490
Espalier and shelter for vines, Combined	P. A. Laprade	193,969	Aug. 7, 1877	169	52	12	257
Evaporating alkaline solutions, Furnace for	J. Kitchen	186,349	Jan. 16, 1877	545	165	11	95
Evaporating and calcining alkaline solutions, Apparatus for.	J. Kitchen and U. C. Allen	196,462	Oct. 23, 1877	811	234	12	700

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Evaporating apparatus	D. Watson	186,645	Jan. 23, 1877	843	261	11	147
Evaporating-pan	W. B. and H. C. Atkinson	198,066	Dec. 11, 1877	359	111	12	1008
Evaporating-pan	W. M. Dixon	193,934	Aug. 7, 1877	136	41	12	253
Evaporating-pan	H. W. Hescock	195,366	Sept. 18, 1877	631	187	12	505
Evaporating-pan	G. T. Jones	192,376	June 26, 1877	917	275	11	1125
Evaporating-pan	J. T. Lockey	186,940	Feb. 6, 1877	28	11	11	205
Evaporating-pan	C. McCauley	195,517	Sept. 25, 1877	794	235	12	536
Evaporating-pan	J. W. Miller	193,539	July 24, 1877	1023	308	12	174
Evaporating-pan	H. Wood	194,283	Aug. 14, 1877	515	156	12	309
Evaporator: *See* Hot-air register evaporator. Juice-evaporator. Salt-water evaporator.							
Evaporator	J. M. Randolph	196,595	Oct. 30, 1877	965	280	12	732
Excavating and loading machine	B. Judy	188,147	Mar. 6, 1877	179	55	11	404
Excavating apparatus	A. W. Johnson	187,283	Feb. 13, 1877	366	117	11	264
Excavating-machine	J. H. McMurphy and E. W. Chapman.	196,589	Oct. 30, 1877	959	278	12	731
Excavator	J. A. Ball	198,445	Dec. 25, 1877	776	235	12	1083
Excavator	S. H. Bodfish	197,451	Nov. 27, 1877	771	230	12	897
Excavator	J. G. Stafford	191,484	May 29, 1877	1403	423, 424	11	963
Exercising device	S. M. Barnett	196,324	Oct. 23, 1877	682	197	12	681
Exercising-machine	L. L. Atwater	195,247	Sept. 18, 1877	527	153	12	490
Exercising-machine	S. C. Foster	195,116	Sept. 11, 1877	376	113	12	460
Exercising-machine	H. F. Hanson and F. O. Bozzell	189,356	Apr. 10, 1877	353	113	11	612
Exercising-machine	A. W. Lozier	191,151	May 1, 1877	40	12	11	151
Exercising-machine	A. W. Lozier	190,503	May 8, 1877	408	119	11	807
Exercising-machine	J. P. Marsh	193,528	July 24, 1877	1012	305	12	173
Exercising-machine	W. M. Marshall	192,338	June 26, 1877	878	265	11	1120
Exercising-machine	I. W. McGaffey	192,836	July 10, 1877	307	90	12	62
Exercising-machine	J. McLaughlin	192,271	June 19, 1877	784	238	11	1096
Exercising-machine	G. W. Wood	189,539	Apr. 10, 1877	523	165	11	635
Explosive compound	O. Bürstenbinder	190,954	May 22, 1877	885		11	885
Explosive compound	J. Goetz	188,124	Mar. 6, 1877	153		11	401
Explosive compound	S. O. Gotham	197,267	Nov. 20, 1877	569		12	859
Explosive compound	S. J. Mackie, C. A. Faure, and G. French.	187,155	Feb. 6, 1877	224	73	11	233
Express-chest, Fire-proof	E. W. Glover	186,828	Jan. 30, 1877	1027	318	11	181
Extension-chair, Adjustable	G. N. Seidler	187,490	Feb. 20, 1877	586	181, 182	11	300
Extension-table	G. Hess	190,034	Apr. 24, 1877	1066	324	11	721
Extension-table	F. R. Osgood	195,387	Sept. 18, 1877	653	194	12	508
Extension-table	J. E. Spraker	189,810	Apr. 17, 1877	813	251	11	680
Extension-table slide	S. B. Alexander	196,412	Oct. 23, 1877	763	220	12	693
Extension-table slide	N. E. Barber	187,583	Feb. 20, 1877	668	208	11	311
Extractor: *See* Bung-extractor. Coal-breaker extractor. Spike-extractor. Stump-extractor.							
Eye-shade, Self-adjusting	T. A. Platt	195,045	Sept. 11, 1877	303	92	12	449
Eye-glass frame	T. A. Willson and G. W. Meigs	195,193	Sept. 11, 1877	452	135	12	472
Eye-glass supporter	F. H. Moore	195,629	Sept. 25, 1877	895	266	12	551
Eyeglasses	H. H. Hempler	188,901	Mar. 27, 1877	958	293	11	534
Eyeglasses	F. P. Iannarone	186,573	Jan. 23, 1877	773	239	11	128
Eyeglasses	F. P. Iannarone	191,149	May 22, 1877	1070	320	11	910
Eyeglasses	I. H. Johannes	189,103	Apr. 3, 1877	81	29	11	570
Eyeglasses	G. Johnston	191,972	June 12, 1877	454	140	11	1041
Eyeglasses	S. Oppenheimer	190,403	May 1, 1877	291	86	11	784
Eyeglasses	J. S. Spencer	186,022	Jan. 9, 1877	213	64	11	45
Eyeglasses	J. S. Spencer	188,264	Mar. 13, 1877	305	96	11	427
Eyeglasses	J. S. Spencer	189,511	Apr. 10, 1877	497	157	11	631
Eyelet	S. W. Young	186,916	Jan. 30, 1877	1115	345	11	192
Eyelet-hooks, Mechanism for setting	J. Charlton	195,341	Sept. 18, 1877	610	179	12	502
F.							
Fabric: *See* Carpet fabric. Elastic fabric. Felted fabric. Ornamental fabric. Printed textile fabric. Shirred fabric. Textile fabric. Wire fabric. Wire and rod fabric. Woven fabric.							
Fabrics, Device for turning or folding the edges of	M. Jonasson	192,766	July 3, 1877	206	59	12	41
Fabrics, Machine for winding up	G. E. Jones	186,256	Jan. 16, 1877	440	135	11	82
Fan	J. G. Schmidt	189,793	Apr. 17, 1877	801	246	11	679
Fan attachment	G. S. Riggs	194,725	Aug. 28, 1877	957	284	12	386
Fan attachment	K. Thompson and L. G. Bergstrom.	189,523	Apr. 10, 1877	507	160	11	633
Fan, Automatic	J. B. Boone	197,012	Nov. 13, 1877	293	86	12	810
Fan, Automatic	J. M. Gray	186,473	Jan. 23, 1877	684	210	11	125
Fan, Automatic	F. Marx and J. N. Blasi	193,836	Aug. 7, 1877	85	27	12	246
Fan, Automatic	J. Miller	193,379	July 24, 1877	867	265	12	153
Fan, Automatic	A. W. Prather and D. D. Shirley.	194,369	Aug. 21, 1877	610	183	12	329
Fan, Automatic fly	J. Baird	191,823	June 12, 1877	309	96	11	1022
Fan, Exhaust and blowing	F. Rohrbacher and F. Hormann	192,285	June 19, 1877	798	243	11	1098
Fan, Fly	H. B. Baker	186,292	Jan. 16, 1877	471	145	11	87
Fan, Fly	W. R. Fowler	186,243	Jan. 16, 1877	428	132	11	81
Fan, Fly	J. F. McMillen	189,373	Apr. 10, 1877	387	118	11	614
Fan, Fly	S. W. Mills	185,945	Jan. 2, 1877	136	41	11	26
Fan, Fly	G. W. J. Woltz	189,537	Apr. 10, 1877	524	165	11	635
Fan or blower, Exhaust	B. F. Sturtevant	195,182	Sept. 11, 1877	442	132	12	470
Fare-box	G. Beadle	197,315	Nov. 20, 1877	618	183	12	866
Fare-box	A. C. Goodell, jr	195,814	Oct. 2, 1877	121	35	12	578
Fare-box	J. D. Pierce	190,075	Apr. 24, 1877	1114	339	11	727
Fare-box	J. B. Slawson	190,255	May 1, 1877	137	41	11	764
Fare-box	J. E. White	195,065	Sept. 11, 1877	329	97	12	452

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Fare-box, Registering	J. C. Strong	186,380	Jan. 16, 1877	581	178	11	99
Fare-box, Street-car	L. Wood	192,805	July 3, 1877	250	73	12	46
Fare-register	V. Fountain, jr.	188,349	Mar. 13, 1877	389	122	11	439
Fare-register	W. H. Hornum	187,632	Feb. 20, 1877	718	222 223	11	317
Fare-register	W. H. Hornum	193,958	Aug. 7, 1877	156	48	12	256
Fare-register	W. H. Hornum	194,913	Sept. 4, 1877	153	48, 49	12	421
Fare-register	A. E. Post	190,617	May 8, 1877	517	154	11	822
Fare-register	H. D. Rodgers	196,389	Oct. 23, 1877	746	215	12	690
Fare-register	P. Seyl	190,912	May 15, 1877	821	242	11	869
Farm-gate	H. N. Dunbar	190,674	May 15, 1877	600	178	11	840
Farm-gate	O. F. Fuller	189,620	Apr. 17, 1877	626	193	11	656
Farm-gate	A. T. and A. D. McComb	193,530	July 24, 1877	1013	305	12	173
Farm-gate	C. A. Mosher	196,925	Nov. 6, 1877	197	57	12	787
Farm-gate	H. Recher	196,101	Oct. 16, 1877	439	128	12	639
Farm-gate	S. S. and J. G. Sherman	192,536	June 26, 1877	1072	323	11	1146
Fats, Extracting oleomargarine from animal	A. Smith	188,428	Mar. 13, 1877	472		11	450
Fats, Purifying raw animal	I. Mayer	195,297	Sept. 18, 1877	572		12	496
Fats, Reducing animal	A. and L. Smith	188,429	Mar. 13, 1877	473	146	11	450
Fats, Treating	A. Springer	187,327	Feb. 13, 1877	413		11	270
Faucet	T. A. Andrews	193,840	Aug. 7, 1877	42	14	12	240
Faucet	H. Bradley	188,577	Mar. 20, 1877	622	192	11	480
Faucet	C. C. Clapp	195,342	Sept. 18, 1877	611	180	12	502
Faucet	W. F. Class	197,249	Nov. 20, 1877	554	164	12	856
Faucet	P. E. Dummer and P. E. Malmstrom.	190,295	May 1, 1877	180	54	11	769
Faucet	G. F. Fogerty	198,286	Dec. 18, 1877	613	186	12	1049
Faucet	G. Gorman	191,848	June 12, 1877	331	103	11	1025
Faucet	J. Graham	197,117	Nov. 13, 1877	406	119	12	827
Faucet	R. Hathaway	191,852	June 12, 1877	335	104	11	1026
Faucet	H. B. Leach	190,053	Apr. 24, 1877	1091	332	11	725
Faucet	W. S. Lempert	195,292	Sept. 18, 1877	568	165	12	495
Faucet	F. C. Lillis	197,557	Nov. 27, 1877	883	263	12	913
Faucet	F. Messmer	190,350	May 1, 1877	231	69	11	776
Faucet	L. A. Rebasz	189,904	Apr. 24, 1877	933	284	11	704
Faucet	W. B. Tweedle	193,430	July 24, 1877	915	278	12	160
Faucet, Ale and beer	A. W. Sperry	193,676	July 31, 1877	1184	355	12	207
Faucet, Beer	O. H. Larson	197,556	Nov. 27, 1877	882	262	12	913
Faucet, Beer	P. Lyons	189,760	Apr. 17, 1877	769	236	11	674
Faucet, Beer	J. Meyer	185,943	Jan. 2, 1877	135	40	11	25
Faucet, Draft	M. Hogan	189,860	Apr. 24, 1877	886	271	11	698
Faucet drip-cup	F. Brigham	189,839	Apr. 24, 1877	868	265	11	696
Faucet for baths, &c., Double	H. C. Meyer	186,685	Jan. 30, 1877	889	275	11	102
Faucet for bottles, Vent	H. Downes	196,437	Oct. 23, 1877	786	227	12	696
Faucet-lining	W. Cleveland	193,111	July 17, 1877	583	176	12	107
Faucet, Measuring	F. H. Hambleton	187,623	Feb. 20, 1877	710	220	11	316
Faucet or cock	I. Simmons	198,253	Dec. 18, 1877	585	177	12	1045
Faucet, Registering and measuring	E. Japy and C. Daillier	196,668	Oct. 30, 1877	1034	301	12	742
Faucet-shield	C. C. Lienau	196,465	Oct. 23, 1877	815		12	700
Faucet-strainer	S. S. Newton	186,154	Jan. 9, 1877	335	103	11	62
Faucet, Vent	A. Lührs	191,982	June 12, 1877	464	143	11	1042
Faucet, Vent	A. Lührs	192,588	July 3, 1877	32	10	12	17
Faucet, Vented demijohn	G. W. Banker	196,285	Oct. 23, 1877	640	186	12	675
Faucet, Ventilating	O. H. Larson	187,286	Feb. 13, 1877	368	118	11	264
Feather, Artificial	J. Brown	186,984	Feb. 6, 1877	73	25	11	211
Feather-renovating machine	I. L. Fisher	185,824	Jan. 2, 1877	10	4	11	10
Feather-renovating machine	M. L. Palmer	190,156	May 1, 1877	45	13	11	152
Feather-renovator	T. J. Adams	195,554	Sept. 25, 1877	824	244	12	541
Feather-renovator	J. C. Divers	188,504	Mar. 20, 1877	557	171	11	470
Feather-renovator	D. Farrar	197,928	Dec. 11, 1877	229	70	12	987
Feather-renovator	J. T. Hopkins and M. H. Smith	187,630	Feb. 20, 1877	717	222	11	317
Feather-renovator	A. McCoonell	197,154	Nov. 13, 1877	441	130	12	832
Feather-renovator	H. G. O. Pabst	185,868	Jan. 2, 1877	52	16	11	15
Feather-renovator	L. C. Quinby	197,663	Nov. 27, 1877	986	294	12	928
Feather-renovator	H. M. Sinclair	193,835	Aug. 7, 1877	37	12	12	239
Feather-renovator	J. J. Van Alstine	195,968	Oct. 9, 1877	291	82	12	610
Feather-renovator	W. Walker	186,966	Feb. 6, 1877	52	18	11	208
Feather-renovator	D. L. Weatherhead	197,435	Nov. 20, 1877	740	221	12	885
Feather-renovator	R. B. Wightman	186,183	Jan. 9, 1877	366	112	11	65
Feathers for dusters, Machine for preparing	G. M. Richmond	196,828	Nov. 6, 1877	90	28	12	773
Feathers, Treating	C. W. Nichols	192,594	July 3, 1877	38	11	12	17
Feed-bag	R. Brass	197,089	Nov. 13, 1877	377	111	12	822
Feed-bag	T. R. Lowerre	195,030	Sept. 11, 1877	284	87	12	447
Feed-bag	J. Weir	196,279	Oct. 16, 1877	625	180	12	664
Feed-bag for horses	G. C. Booth	186,301	Jan. 16, 1877	478	147	11	88
Feed-cooker	C. S. Burns	196,628	Oct. 30, 1877	994	290	12	736
Feed-cutter	L. Becker	192,218	June 19, 1877	724	221	11	1089
Feed in troughs, Device for depositing	A. J. Rush	193,185	July 17, 1877	644	196	12	116
Feed-rack	W. H. Howard	191,590	June 5, 1877	74	22	11	986
Feed-trough	T. L. Block	191,398	May 29, 1877	1310	398	11	952
Feed-trough for horses	G. C. Broom	195,205	Sept. 18, 1877	479	142	12	483
Feed-water heater	C. F. Barrett	191,747	June 12, 1877	233	73	11	1013
Feed-water heater	J. L. Bogert	197,959	Dec. 11, 1877	289	89	12	996
Feed-water heater	A. Carpenter	185,893	Jan. 2, 1877	80	24	11	18
Feed-water heater	J. Eckersley	190,567	May 8, 1877	468	139	11	815
Feed-water heater	B. Eynon	189,206	Apr. 3, 1877	171	59	11	582
Feed-water heater	S. H. Gilman	196,292	Oct. 23, 1877	649	188	12	676
Feed-water heater	W. Lowe	191,868	June 12, 1877	350	108	11	1027
Feed-water heater	F. B. Rice	191,471	May 29, 1877	1387	418	11	961
Feed-water heater	J. C. Stead	198,428	Dec. 18, 1877	745	225	12	1069
Feed-water heater	G. Steele	188,202	Mar. 6, 1877	241	75	11	412
Feed-water heater and cleanser	J. F. Morse	196,988	Nov. 13, 1877	271	80	12	806
Feed-water heater and feeder	G. H. Burroughs	195,975	Oct. 9, 1877	298	83	12	611

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Feed-water heater and filter	W. J. Austin	193,843	Aug. 7, 1877	44	14	12	241
Feed-water heater and pump combined	D. E. Rice	193,617	July 31, 1877	1120	336	12	199
Feed-water heater and purifier	E. E. Hermans and W. D. Smith	196,013	Oct. 9, 1877	335	95	12	616
Feed-water heater and purifier	N. A. T. Jones	196,808	Nov. 6, 1877	70	21	12	770
Feed-water heater, Boiler	A. T. Denison	189,847	Apr. 24, 1877	873	267	11	697
Feed-water heater, Steam-boiler	G. Kratz	195,614	Sept. 25, 1877	881	262	12	549
Feed-water heater, Steam-boiler	T. Snowden	188,201	Mar. 6, 1877	239	75	11	411
Feed-water heater, Locomotive	N. W. Kirby	191,597	June 5, 1877	80	24	11	987
Feed-water regulator, Automatic	E. Gorriti and P. Unanne	196,797	Nov. 6, 1877	59	18	12	769
Feed-water regulator, Steam-boiler	N. T. Edson	197,258	Nov. 20, 1877	562	166	12	857
Feeder, Hog	S. Bryan	198,564	Dec. 25, 1877	886	270	12	1099
Feeder, Stock	A. W. Prather	192,876	July 10, 1877	346	102	12	67
Fellies, Machine for making metal	R. W. Davis	186,810	Jan. 30, 1877	1006	312	11	178
Felly	W. A. Wharton	189,162	Apr. 3, 1877	129	46	11	577
Felt, Manufacture of articles of	P. A. Dailey	198,357	Dec. 18, 1877	674	206	12	1059
Felt, Non-conducting	S. Radcliffe	190,159	May 1, 1877	49		11	753
Felt, &c., Sizing-machine for	M. Chittenden	196,968	Nov. 13, 1877	250	74	12	804
Felted articles, Manufacture of	J. Batley, J. Keats, and J. Neil	195,078	Sept. 11, 1877	336	102	12	454
Felted fabric	P. A. Dailey	195,099	Sept. 11, 1877	357	108	12	457
Felted fabric	A. M. Daniels and S. I. Tuttle	191,840	June 12, 1877	325	101	11	1024
Felted fabrics, Embossing	J. F. Greene	193,945	Aug. 7, 1877	145	44	12	254
Felted shoes, slippers, &c., Manufacture of	M. Bailey	194,400	Aug. 21, 1877	637	192	12	333
Felting-machine	J. Keats	193,712	July 31, 1877	1214	364	12	211
Fence	O. Cleaveland	186,543	Jan. 23, 1877	747	229	11	134
Fence	A. O. Corell	195,487	Sept. 25, 1877	764	225	12	532
Fence	I. N. Cunningham	195,097	Sept. 11, 1877	356	107	12	457
Fence	F. Fulkerson	195,757	Oct. 2, 1877	65	20	12	570
Fence	J. Garrett	191,847	June 12, 1877	331	103	11	1025
Fence	J. G. Gilpin	187,124	Feb. 6, 1877	196	64	11	229
Fence	D. Gordon	197,119	Nov. 13, 1877	408	120	12	827
Fence	A. Gosnell	191,422	May 29, 1877	1332	404	11	954
Fence	C. S. S. Griffing	197,846	Dec. 4, 1877	139	42	12	965
Fence	N. B. and T. Gunn	195,503	Sept. 25, 1877	782	230	12	534
Fence	K. S. Johnson	191,240	May 29, 1877	1177	353	11	933
Fence	V. A. Kilgroe	193,661	July 31, 1877	1171	351	12	205
Fence	P. Kirby	190,339	May 1, 1877	221	66	11	775
Fence	D. E. Lupold	198,640	Dec. 25, 1877	963	293	12	1110
Fence	A. J. Marks	197,875	Dec. 4, 1877	168	51	12	970
Fence	A. A. McAllister	192,709	July 3, 1877	156	44	12	34
Fence	A. J. Nellis	186,153	Jan. 9, 1877	335	102	11	61
Fence	G. W. P. Oliver and T. A. Wiles	196,472	Oct. 23, 1877	820	236	12	701
Fence	D. R. Ostrander	186,688	Jan. 30, 1877	892	276	11	162
Fence	D. R. Ostrander	193,274	July 17, 1877	746	228	12	129
Fence	J. W. Paisley	192,276	June 19, 1877	789	241	11	1097
Fence	E. H. Perry	191,517	June 5, 1877	40	11	11	981
Fence	A. C. Reed, R. S. and R. L. Greenlee.	194,724	Aug. 28, 1877	957	284	12	386
Fence	J. V. Richardson	194,176	Aug. 14, 1877	413	124	12	296
Fence	L. B. Richardson	196,251	Oct. 16, 1877	595	172	12	660
Fence	C. A. Root	192,350	June 26, 1877	891	267	11	1122
Fence	I. and E. Saltsman	188,030	Mar. 6, 1877	73	21	11	390
Fence	O. H. Smith	186,631	Jan. 23, 1877	831	257	11	145
Fence	S. W. Sumpter and H. Brown	190,643	May 8, 1877	549	163	11	826
Fence	J. Walter	197,806	Dec. 4, 1877	100	30	12	960
Fence	R. F. Ward	191,626	June 5, 1877	108	33	11	991
Fence	R. F. Ward	191,627	June 5, 1877	108	33	11	991
Fence	J. W. Webster	187,334	Feb 13, 1877	420	131	11	271
Fence and telegraph wires, Splicing	W. B. Hayden	191,339	May 29, 1877	1262	381	11	945
Fence-barb	W. T. Burrows	192,736	July. 3, 1877	176	51	12	37
Fence-barb	C. E. Kelley	197,378	Nov. 20, 1877	682	204	12	876
Fence-barb	A. J. Nellis	191,011	May 22, 1877	943	279	11	893
Fence barb, Wire	F. L. Bestor	197,757	Dec. 4, 1877	55	18	12	953
Fence barb, Wire	H. B. Scutt	193,557	July 24, 1877	1042	312	12	177
Fence barbs, Machine for forming wire	G. A. Crosby and G. W. White	196,290	Oct. 23, 1877	645	187	12	676
Fence, Barbed	G. G. Hunt	189,861	Apr. 24, 1877	887	271	11	699
Fence, Barbed	G. G. Hunt	193,370	July 24, 1877	860	263	12	152
Fence, Barbed	L. P. Judson	191,348	May 29, 1877	1270	383	11	946
Fence, Barbed	A. J. Nellis	187,723	Feb. 27, 1877	825	257	11	340
Fence, Barbed	A. J. Nellis	191,993	June 12, 1877	473	146	11	1043
Fence, Barbed	C. P. Parker	194,260	Aug. 14, 1877	488	147	12	3 6
Fence, Barbed	F. C. Randall	197,172	Nov. 13, 1877	460	136	12	835
Fence, Barbed	M. C. Richards	191,468	May 29, 1877	1385	418	11	961
Fence, Barbed	C. L. Topliff	191,818	June 12, 1877	302	93	11	1021
Fence, Barbed	C. F. Washburn	186,389	Jan. 16, 1877	592	181	11	100
Fence, Barbed-wire	A. E. Bronson	189,994	Apr. 24, 1877	1013	310	11	715
Fence, Barbed-wire	H. Cherry and H. E. Wheeler	195,091	Sept. 11, 1877	351	106	12	456
Fence, Barbed-wire	L. H. McFarland	198,135	Dec. 11, 1877	433	135	12	1017
Fence, Barbed-wire	C. W. and W. Scarlett	190,081	Apr. 24, 1877	1121	340	11	728
Fence, Barbed-wire	J. F. Steward	191,263	May 29, 1877	1198	359	11	936
Fence, Board	L. F. Wilder	195,426	Sept. 18, 1877	692	205	12	514
Fence-cap, Metallic	J. D. W. Lauckhardt	191,003	June 5, 1877	86	26	11	988
Fence, Farm	H. C. Ogle and D. M. Robison	186,868	Jan. 30, 1877	1074	332	11	186
Fence, Flood	W. H. Johnson	192,765	July 3, 1877	205	59	12	40
Fence, Iron	S. H. Dickey and J. D. Davis	195,103	Sept. 11, 1877	361	109	12	458
Fence, Iron	A. J. Nellis and D. C. Guttridge	186,362	Jan. 16, 1877	557	169 170	11	96
Fence, Iron	C. A. Root and D. W. Strickland	189,323	Apr. 10, 1877	326	103	11	609
Fence, Iron	J. H. Van Dorn	189,543	Apr. 10, 1877	533	167	11	636
Fence layer, Hedge	F. Poole and W. A. Pendergraft	195,046	Sept. 11, 1877	303	92	12	449
Fence, Metallic	L. H. Burt	196,332	Oct. 23, 1877	691	199	12	682
Fence, Metallic	C. J. Reiling	197,976	Dec. 11, 1877	278	85	12	994
Fence, Metallic barbed	J. Brinkerhoff	186,922	Feb. 6, 1877	3	2	11	203
Fence, Picket	J. A. Green and A. J. Knapp	193,944	Aug. 7, 1877	144	44	12	254
Fence, Portable	S. G. Burke	190,547	May 8, 1877	449	133	11	813

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Fence, Portable	T. A. H. Cameron	192,228	June 19, 1877	737	225	11	1091
Fence, Portable	T. A. H. Cameron	192,229	June 19, 1877	738	225	11	1091
Fence, Portable	A. S. Chaney	191,113	May 22, 1877	1037	310	11	906
Fence, Portable	A. S. Chaney	195,981	Oct. 9, 1877	306	85	12	611
Fence, Portable	E. S. Hotham	196,067	Oct. 30, 1877	1034	300	12	741
Fence, Portable	G. S. Pickett	188,816	Mar. 27, 1877	881	267	11	523
Fence, Portable	J. T. Roundtree	192,257	June 19, 1877	802	244	11	1099
Fence, Portable	J. M. Smith	194,538	Aug. 28, 1877	790	235	12	362
Fence, Portable	J. G. Sutton	194,187	Aug. 14, 1877	421	127	12	297
Fence-post	E. W. Bullard	192,053	June 19, 1877	560	171	11	1067
Fence-post	G.W. Chandler and S. H. Deering	196,561	Oct. 30, 1877	934	270	12	727
Fence-post	P. O. Cornell	197,338	Nov. 20, 1877	645	191	12	870
Fence-post	H. Delano	191,941	June 12, 1877	422	130	11	1037
Fence-post	R. Dewey	191,944	June 12, 1877	425	131	11	1037
Fence-post	N. T. Dye	192,818	July 10, 1877	290	84	12	60
Fence-post	J. W. Fiey	196,003	Oct. 9, 1877	326	92	12	615
Fence-post	E. L. Gillham	196,889	Nov. 6, 1877	160	47	12	782
Fence-post	P. Jones	188,372	Mar. 13, 1877	418	130	11	443
Fence-post	W. Langham	191,445	May 29, 1877	1362	411	11	958
Fence-post	W. B. Markham	189,480	Apr. 10, 1877	469	148	11	628
Fence-post	D. Moyer	188,172	Mar. 6, 1877	204	63	11	407
Fence-post	A. J. Nellis	195,723	Oct. 2, 1877	34	10	12	565
Fence-post	J. R. Peffley	189,256	Apr. 3, 1877	224	75	11	588
Fence-post	T. L. Pope	195,533	Sept. 25, 1877	805	238	12	538
Fence-post	R. J. Redmond	197,054	Nov. 13, 1877	338	100	12	816
Fence-post	H. Reynolds	197,496	Nov. 27, 1877	817	244	12	904
Fence-post	P. J. Rickard	186,271	Jan. 16, 1877	454	139	11	84
Fence-post	A. Shaffer	198,694	Dec. 25, 1877	1014	308	12	1117
Fence-post	A. B. Spront	195,851	Oct. 2, 1877	160	45	12	583
Fence-post	G. B. St. John	191,485	May 29, 1877	1404	424	11	963
Fence-post	H. J. St. John	195,671	Sept. 25, 1877	936	279	12	557
Fence-post	E. Willcuts	196,175	Oct. 16, 1877	516	150	12	649
Fence-post	T. G. Wing and J. H. Thompson	187,337	Feb. 13, 1877	422	132	11	271
Fence-post attachment	G. J. Barnhart	193,683	July 31, 1877	1191	356	12	208
Fence-post, Iron	S. S. Crocker and A. Wilcox	196,337	Oct. 23, 1877	696	200	12	683
Fence-post, Iron	F. C. Hall	194,963	Sept. 11, 1877	218	68	12	438
Fence-post, Iron	W. T. McNeill and G. A. Lambert	196,816	Nov. 6, 1877	78	24	12	772
Fence-post, Iron	J. B. Perkins	195,229	Sept. 18, 1877	504	148	12	487
Fence-post, Iron	S. H. St. John	192,435	Mar. 13, 1877	478	148	11	451
Fence-post, Metal	B. T. Frederick	198,598	Dec. 25, 1877	916	279	12	1104
Fence-post, Metallic	J. Brinkerhoff	189,918	Apr. 24, 1877	944	289	11	706
Fence-post, Metallic	S. Miller	192,779	July 3, 1877	222	64	12	42
Fence-post, Portable	S. R. Beam	192,965	July 10, 1877	427	128	12	79
Fence-post tip	D. C. Morris	189,252	Apr. 3, 1877	221	74	11	588
Fence post, Wire	S. Reynolds	190,621	May 8, 1877	526	156	11	823
Fence-rails, Tool for making barbed	L. M. Woodcock	189,982	Apr. 24, 1877	1004	307	11	714
Fence stretcher, Wire	H. Schilgen	195,955	Oct. 9, 1877	278	78	12	608
Fence-strip, Barbed hoop-iron	W. G. Barnes	191,913	June 12, 1877	391	121	11	1033
Fence-support	J. R. Hall	196,086	Oct. 16, 1877	421	122	12	636
Fence-supporter, Portable	J. R. Gorby	192,501	June 26, 1877	1033	311	11	1141
Fence tightener, Wire	C. C. La Rue	195,026	Sept. 11, 1877	281	86	12	446
Fence-wire	E. M. Crandal	198,083	Dec. 11, 1877	376	117	12	1010
Fence, Wire	W. H. H. Frye	188,350	Mar. 13, 1877	390	122	11	439
Fence, Wire	C. D. Johnson and L. F. Johnston	188,916	Mar. 27, 1877	973	298	11	536
Fence, Wire	W. A. Middleton	198,140	Dec. 11, 1877	437	136	12	1018
Fence, Wire	A. Putnam, jr	197,661	Nov. 27, 1877	985	294	12	928
Fence-wire barb	W. T. Burrows	194,647	Aug. 28, 1877	883	263	12	376
Fence-wire, Barbed	A. S. Burnell	192,225	June 19, 1877	731	223	11	1090
Fence-wire, Barbed	A. C. Decker	186,716	Jan. 30, 1877	916	284	11	166
Fence-wire, Barbed	J. Dobbs	190,836	May 15, 1877	748	222	11	860
Fence-wire, Barbed	G. G. Hunt	197,729	Dec. 4, 1877	21	7	12	949
Fence-wire, Barbed	O. O. Kittleson	189,047	Apr. 3, 1877	34	12	11	563
Fence-wire, Barbed	J. McNeill	189,122	Apr. 3, 1877	96	35	11	572
Fence-wire, Barbed	H. W. Putnam	187,172	Feb. 6, 1877	239	78	11	235
Fence-wire, Barbed	W. L. Reynolds	187,049	Feb. 6, 1877	128	42	11	220
Fence-wire, Barbed	H. M. Rose	198,688	Dec. 25, 1877	1009	306	12	1116
Fence-wire, Barbed	H. B. Scutt	195,239	Sept. 18, 1877	517	151	12	488
Fence-wire, Barbed	T. D. Stetson	192,468	June 26, 1877	998	301	11	1137
Fence-wire, Barbed	D. C. Stover	190,167	May 1, 1877	60	16	11	754
Fence-wire barbing-machine	H. W. Putnam	187,776	Feb. 27, 1877	876	273	11	347
Fence-wire, Device for tightening	J. B. Barber	195,431	Sept. 18, 1877	497	206	12	515
Fence-wire, Machine for twisting and spooling barbed.	J. F. Glidden	187,126	Feb. 6, 1877	197	65	11	230
Fence-wire stretcher	N. Burnham	195,568	Sept. 25, 1877	838	240	12	543
Fence-wire stretcher	W. W. S. Kime	193,005	July 10, 1877	460	139	12	83
Fence-wire tightener	G. Duffey	192,494	June 26, 1877	1027	309	11	1140
Fence, Wrought-iron	R. Morgan	197,391	Nov. 20, 1877	695	208	12	878
Fence, Zigzag	N. H. Hamlot	195,759	Oct. 2, 1877	67	20	12	570
Fences, Iron post and attachment for wire	S. Miller	196,535	Oct. 30, 1877	908	263	12	724
Fences, Iron post for wire	C. H. Morgan and J. F. Landers	192,592	July 3, 1877	36	11	12	17
Fences, Iron post for wire	J. Plane	191,881	June 12, 1877	361	111	11	1029
Fender: *See* Fire-place fender. Heat-fender. Grate-fender. Plow-fender. Harness-line fender. Wall-fender.							
Fermenting-vat	C. Klein	193,714	July 31, 1877	1215	364	12	211
Ferrule for tool-handles	A. Shoeninger	197,417	Nov. 20, 1877	723	215	12	882
Ferry-boat	J. G. Densmore	196,566	Oct. 30, 1877	940	271	12	728
Fertilizer	C. F. Panknin	193,890	Aug. 7, 1877	90		12	247
Fertilizer and seed sower combined	R. L. Galer and E. E. Spencer	186,823	Jan. 30, 1877	1020	316	11	180
Fertilizer-distributer	J. G. Sims	195,959	Oct. 9, 1877	283	79	12	608
Fetter to prevent cows and horses kicking	H. R. Ladd and Z. C. Parker	193,968	Aug. 7, 1877	168	52	12	257
Fevers, Remedy for	J. D. Lipscomb	186,141	Jan. 9, 1877	325		11	60
Fiber from pita, Machine for extracting	C. De La Baquera	197,555	Nov. 27, 1877	881	262	12	913

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Fiber, &c., Machine for polishing vegetable	G. and T. Shaw	198,315	Dec. 18, 1877	634	193	12	1053
Fiber, Softening, discolorizing, and cleansing animal and vegetable.	W. Maynard	187,882	Feb. 27, 1877	983		11	361
Fiber, Treating animal	J. F. Greene	193,649	July 31, 1877	1158		12	293
Fibers by chemical reagents, Apparatus for digesting and macerating.	W. W. Harding	197,850	Dec. 4, 1877	142	43	12	966
Fifth-wheel	S. P. Stillman	192,949	July 10, 1877	411	123	12	77
Fifth-wheel, Vehic'e	I. Eaton and H. M. Fortney	194,959	Sept. 11, 1877	213	67	12	437
Fifth-wheel, Vehicle	W. J. Elsom	195,754	Oct. 2, 1877	63	19	12	570
Fifth-wheel, Vehicle	I. W. Mead	198,407	Dec. 18, 1877	725	219	12	1066
Fifth-wheel, Wagon	J. J. Black	193,594	July 31, 1877	1096	328	12	195
File	P. Hefferman	189,733	Apr. 17, 1877	738	226	11	671
File	W. T. Nicholson	187,298	Feb. 13, 1877	381	121	11	266
File and screw-driver combined	S. Harris	196,354	Oct. 23, 1877	711	204	12	685
File, Bill	J. A. Austin	195,248	Sept. 18, 1877	528	154	12	490
File, Bill	C. C. Chamberlain	188,588	Mar. 20, 1877	632	195	11	481
File, Bill	J. W. Reynolds	195,167	Sept. 11, 1877	427	126	12	468
File, Bill	D. H. Thomas	193,296	July 17, 1877	770	236	12	132
File, Druggist's prescription	C. G. Stromberg	191,783	June 12, 1877	266	83	11	1017
File-holder	W. T. Nicholson	191,811	June 12, 1877	294	91	11	1021
File, Letter	T. H. Brown, jr	196,558	Oct. 30, 1877	931	270	12	727
File, Newspaper	C. Z. O'Neill	188,068	Mar. 6, 1877	107	32	11	395
File, Newspaper	P. E. Sloan	186,280	Jan. 16, 1877	460	142	11	85
Files in hardening, Clamp for straightening	W. S. Birks	194,762	Sept. 4, 1877	4	1	12	401
Filter	V. Dordet	188,606	Mar. 20, 1877	646	200	11	483
Filter	J. Foley	192,750	July 3, 1877	189	55	12	39
Filter	R. S. Jennings	188,144	Mar. 6, 1877	176	54	11	404
Filter	H. W. Watson	192,103	June 19, 1877	605	184	11	1074
Filter	G. W. Woolsey	188,274	Mar. 13, 1877	316	100	11	429
Filter and cooler	J. Peter and T. C. Walter	193,722	July 31, 1877	1222	367	12	212
Filter attachment	A. Macqueen, jr	196,370	Oct. 23, 1877	727	209	12	687
Filter, Atmospheric	R. C. Ludlow	198,637	Dec. 25, 1877	959	293	12	1110
Filter, Coffee	M. O'Connor	187,407	Feb. 13, 1877	486	151	11	280
Filter for faucets and hydrants	A. Gorham	197,627	Nov. 27, 1877	956	284	12	924
Filter, Liquid	M. Lansburgh	189,364	Apr. 10, 1877	360	116	11	613
Filter, Liquid	C. F. Vent	195,423	Sept. 18, 1877	686	{203 204}	12	513
Filter-press	J. Bowing	194,124	Aug. 14, 1877	363	108	12	189
Filter-rack	B. Fenner	189,929	Apr. 24, 1877	955	292	11	708
Filter, Self-cleaning	H. W. Watson	192,313	June 19, 1877	835	253	11	1103
Filter, Service-pipe	J. C. Nichols	193,720	July 31, 1877	1220	366	12	212
Filter, Water	W. S. Fleming and A. Burns	190,569	May 8, 1877	470	139	11	815
Filter, Water	J. J. Lawler	194,692	Aug. 28, 1877	926	275	12	382
Filter, Water	C. C. Morgan	189,771	Apr. 17, 1877	778	239	11	675
Filter, Water	W. Nugent	193,775	July 31, 1877	1275	383	12	220
Filter, Water	W. S. Snook	189,806	Apr. 17, 1877	810	250	11	680
Filter, Water	C. C. Tittle and J. F. Nolte	194,016	Aug. 7, 1877	218	65	12	263
Filters, and process of cleaning the same, Sirup and sugar.	W. J. Allen	189,594	Apr. 17, 1877	601	186	11	653
Filters, Recovery of spirits from spent charcoal of rectifying.	E. A. McKeever	194,256	Aug. 14, 1877	483	146	12	306
Filtering and cooling apparatus	J. W. Webb	193,432	July 24, 1877	916	279	12	161
Filtering apparatus	J. Gainey	191,131	May 22, 1877	1055	316	11	968
Filtering medium for the purification of water, &c., Manufacture of a.	E. Johnson and J. Robey	197,637	Nov. 27, 1877	965		12	925
Filtration, Artificial	J. D. Cook	187,966	Mar. 6, 1877	10	3	11	382
Finger-bars, Manufacture of	J. S. Atkinson	186,972	Feb. 6, 1877	57	19	11	209
Finger-guard	K. A. Wynne	191,742	June 5, 1877	216	68	11	1006
Finger-nail cutter	R. W. Stewart	190,989	May 22, 1877	922	272	11	899
Fire-alarm and gas-intercepter, Electro-magnetic	A. A. Frécot	198,371	Dec. 18, 1877	689	210	12	1061
Fire-alarm signal-box	G. Floyd	186,819	Jan. 30, 1877	1015	315	11	180
Fire, and apparatus therefor, Extinguishing	D. McLennan	188,929	Mar. 27, 1877	985	302	11	537
Fire and burglar alarm	C. Corning and A. J. Reid	193,588	July 24, 1877	1070	321	12	180
Fire and marine escape	L. Livingston	194,778	Sept. 4, 1877	24	8	12	404
Fire and police alarm-signal apparatus	C. Selden	186,887	Jan. 30, 1877	1088	337	11	188
Fire and weather proof composition	A. Jamieson	194,916	Sept. 4, 1877	157		12	422
Fire apparatus	J. L. Hastings	196,089	Oct. 16, 1877	424	{123 124}	12	637
Fire, Apparatus for rescuing goods from	G. W. Staker	188,431	Mar. 13, 1877	475	147	11	450
Fire-arm	W. M. Wood, jr	193,906	Aug. 7, 1877	105	33, 34	12	249
Fire-arm, Breech-loading	V. Bovy	191,563	June 5, 1877	51	15	11	983
Fire-arm, Breech-loading	V. Bovy	196,781	Nov. 6, 1877	42	13	12	767
Fire-arm, Breech-loading	H. W. Chapman	190,820	May 15, 1877	736	218	11	858
Fire-arm, Breech-loading	W. M. Clark	198,080	Dec. 11, 1877	372	116	12	1009
Fire-arm, Breech-loading	I. M. Earle	189,026	Apr. 3, 1877	17	6	11	561
Fire arm, Breech-loading	J. S. Edge, jr	188,111	Mar. 6, 1877	142	42, 43	11	399
Fire-arm, Breech-loading	E. Engel	191,124	May 22, 1877	1045	313	11	907
Fire-arm, Breech-loading	C. Entobrouk	187,462	Feb. 20, 1877	558	173	11	296
Fire-arm, Breech-loading	J. Farquharson	193,759	July 31, 1877	1258	378	12	218
Fire-arm, Breech-loading	B. O. Fasoldt	195,496	Sept. 25, 1877	774	227	12	533
Fire-arm, Breech-loading	G. H. Fox	196,748	Nov. 6, 1877	11	4	12	762
Fire-arm, Breech-loading	F. W. Freund	185,911	Jan. 2, 1877	98	30	11	21
Fire-arm, Breech-loading	G. D. Goodell	197,773	Dec. 4, 1877	71	22	12	956
Fire-arm, Breech-loading	H. Goodman	185,912	Jan. 2, 1877	100	30, 31	11	21
Fire-arm, Breech-loading	L. W. Heysinger	194,679	Aug. 28, 1877	913	272	12	380
Fire-arm, Breech-loading	A. J. Hudson	187,280	Feb. 13, 1877	363	116	11	264
Fire-arm, Breech-loading	D. Kirkwood	191,862	June 12, 1877	345	106	11	1027
Fire-arm, Breech-loading	J. Lee	193,821	Aug. 7, 1877	25	8	12	237
Fire-arm, Breech-loading	J. C. Petmecky	193,670	July 31, 1877	1179	353	12	206
Fire-arm, Breech-loading	J. C. Petmecky	197,892	Dec. 4, 1877	184	56	12	972
Fire-arm, Breech-loading	F. Ralph	198,154	Dec. 11, 1877	450	141	12	1020
Fire-arm, Breech-loading	H. Rowell	187,319	Feb. 13, 1877	403	127	11	269
Fire-arm, Breech-loading	J. Schudt	191,721	June 5, 1877	196	62	11	1003
Fire-arm, Breech-loading	J. Schudt and J. P. Schuch	197,742	Dec. 4, 1877	35	12	12	951

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Fire-arm, Breech-loading	H. Sutter	196,399	Oct. 23, 1877	753	217	12	692
Fire-arm, Breech-loading	F. W. Tiesing	191,197	May 22, 1877	1114	333, 334	11	917
Fire-arm, Breech-loading	H. Updegraff	189,973	Apr. 24, 1877	996	304, 305	11	713
Fire-arm, Breech-loading	F. Wesson and C. N. Cutter	193,060	July 10, 1877	516	156	12	91
Fire-arm lock	I. W. Heysinger	194,680	Aug. 28, 1877	915	272	12	380
Fire-arm lock	I. Robbins	189,387	Apr. 10, 1877	378	122	11	616
Fire-arm lock, Magazine	G. F. Evans	189,848	Apr. 24, 1877	874	267	11	697
Fire-arm, Magazine	T. G. Bennett	188,844	Mar. 27, 1877	904	275	11	526
Fire-arm, Magazine	G. F. Evans	192,749	Jnly 3, 1877	188	54	12	38
Fire-arm, Magazine	J. W. Keene	188,468	Mar. 20, 1877	523	161, 162	11	466
Fire-arm, Magazine	E. R. Quimby	195,690	Sept. 25, 1877	953	285	12	559
Fire-arm, Magazine	F. W. Tiesing	191,196	May 22, 1877	1112	332, 333	11	916
Fire-arm, Magazine	F. W. Tiesing	193,574	July 24, 1877	1058	317	12	179
Fire-arm, Magazine	W. W. Wetmore and T. G. Bennett	190,264	May 1, 1877	147	43	11	765
Fire-arm, Revolving	W. G. Ayres and G. Whittaker	187,244	Feb. 13, 1877	327	105	11	259
Fire-arm, Revolving	T. W. Bearcock	195,562	Sept. 25, 1877	831	247	12	542
Fire-arm, Revolving	J. Brooks and T. W. Bearcock	190,543	May 8, 1877	445	131	11	812
Fire-arm, Revolving	J. A. Crocker	194,653	Aug. 28, 1877	887	265	12	377
Fire-arm, Revolving	S. Forehand and H. C. Wadsworth	193,367	July 24, 1877	857	262	12	152
Fire-arm, Revolving	H. L. Gardner	186,470	Jan. 23, 1877	681	209	11	125
Fire-arm, Revolving	W. A. Hulbert	187,975	Mar. 6, 1877	21	5	11	383
Fire-arm, Revolving	O. Jones	189,360	Apr. 10, 1877	356	115	11	613
Fire-arm, Revolving	D. Moore	187,980	Mar. 6, 1877	24	6	11	384
Fire-arm, Revolving	D. Moore	190,240	May 1, 1877	122	36	11	762
Fire-arm, Revolving	D. Moore	193,269	July 17, 1877	739	226	12	128
Fire-arm, Revolving	C. H. Richardson	191,178	May 22, 1877	1098	328	11	914
Fire-arm, Revolving	G. W. Schofield	193,620	July 31, 1877	1123	337	12	199
Fire-arm, Revolving	D. Smith	193,836	Aug. 7, 1877	38	12	12	239
Fire-arm, Revolving	D. Smith	196,491	Oct. 23, 1877	845	243	12	703
Fire-arm, Revolving	T. M. Wallis	194,489	Aug. 21, 1877	734	218	12	346
Fire-arm, Revolving	D. B. Wesson	186,509	Jan. 23, 1877	711	219	11	129
Fire-arm, Revolving	D. B. Wesson and J. H. Bullard	187,689	Feb. 20, 1877	767	238	11	324
Fire-arm, Revolving	D. B. Wesson and J. H. Bullard	198,228	Dec. 18, 1877	546	169	12	1040
Fire-arm, Revolving	A. E. Whitmore	185,881	Jan. 2, 1877	65	20	11	17
Fire-arm, Revolving	R. D. Williams	197,708	Nov. 27, 1877	1046	314	12	935
Fire-arm, Revolving	S. W. Wood	186,445	Jan. 23, 1877	659	202	11	122
Fire-arm trigger	M. Heuser	191,341	May 29, 1877	1253	381	11	945
Fire-arm wiper	J. T. Hamilton	189,455	Apr. 10, 1877	446	140	11	624
Fire-arms, &c., Collimating-sight for	C. A. L. Totten	187,432	Feb. 13, 1877	514	159	11	283
Fire-arms, Combined screw-driver and band for	B. B. Hotchkiss	186,566	Jan. 23, 1877	767	236	11	137
Fire-arms, Combined tool for	W. G. Rawbone	188,482	Mar. 20, 1877	536	165	11	467
Fire-arms, Front sight for	F. W. Frennd	189,721	Apr. 17, 1877	723	223	11	669
Fire-arms, Rear sight for	A. T. Decker	198,279	Dec. 18, 1877	608	184	12	1049
Fire-arms, Rear sight for	C. F. Robbins	190,782	May 15, 1877	703	208	11	853
Fire-arms, Sight for	M. L. McCord	195,518	Sept. 25, 1877	794	235	12	536
Fire-arms, Sight for	M. B. White	193,061	July 10, 1877	517	156	12	91
Fire-arms, Sight for	G. L. Winship	198,231	Dec. 18, 1877	551	169	12	1041
Fire-bars, Expansion-joint for tubular water	F. R. Ellis	191,325	May 29, 1877	1251	377	11	944
Fire-box crown-sheet	H. S. Bryan	198,342	Dec. 18, 1877	658	200	12	1056
Fire-engine	J. Grzybowski	193,603	July 31, 1877	1105	331	12	196
Fire-engine, Hand	L. Taylor	195,183	Sept. 11, 1877	444	132	12	471
Fire-escape	I. H. Allen	192,403	June 26, 1877	945	283	11	1129
Fire-escape	T. A. Andrews	193,841	Aug. 7, 1877	42	15	12	241
Fire-escape	E. W. Averell	195,788	Oct. 2, 1877	92	27	12	575
Fire-escape	C. Bacon and J. L. Thomas	194,544	Aug. 28, 1877	796	237	12	363
Fire-escape	H. W. Chapman	194,989	Sept. 11, 1877	244	74	12	441
Fire-escape	A. L. Clark	191,115	May 22, 1877	1038	311	11	906
Fire-escape	W. N., J. B., and W. N. Clark, jr.	194,291	Aug. 21, 1877	534	162	12	319
Fire-escape	R. A. Copeland	188,234	Mar. 13, 1877	281	88	11	424
Fire-escape	I. D. Cross	193,489	July 24, 1877	968	294	12	168
Fire-escape	J. F. Dartt and J. W. Post	191,118	May 22, 1877	1040	312	11	906
Fire-escape	J. Davenport	195,747	Oct. 2, 1877	57	17	12	569
Fire-escape	J. P. Duncan	192,364	June 26, 1877	905	271	11	1124
Fire-escape	M. Dnrand	190,837	May 15, 1877	749	222	11	860
Fire-escape	C. Dwight	190,015	Apr. 24, 1877	1046	319	11	719
Fire-escape	J. Eichler	194,228	Aug. 14, 1877	458	139	12	302
Fire-escape	H. Elbe	194,138	Aug. 14, 1877	376	112	12	291
Fire-escape	E. E. Everitt	197,927	Dec. 11, 1877	228	70	12	987
Fire-escape	D. B. Ewing	191,125	May 22, 1877	1047	314	11	907
Fire-escape	G. W. Eyler	195,354	Sept. 18, 1877	620	184	12	503
Fire-escape	L. Falk	194,082	Aug. 14, 1877	300	90	12	282
Fire-escape	B. F. Frank	193,861	Aug. 7, 1877	58	19	12	243
Fire-escape	R. Gilchriest	191,953	June 12, 1877	432	134	11	1038
Fire-escape	F. E. Goble	192,500	June 26, 1877	1032	311	11	1140
Fire-escape	C. A. Gregory	197,727	Dec. 4, 1877	19	6	12	949
Fire-escape	W. Guthrie	192,758	July 3, 1877	199	57	12	40
Fire-escape	S. H. Harrington	192,693	July 3, 1877	144	40	12	32
Fire-escape	L. Henkle	191,677	June 5, 1877	158	49	11	998
Fire-escape	C. Henry	192,995	July 10, 1877	451	136	12	82
Fire-escape	J. Heuermann	188,362	Mar. 13, 1877	404	126	11	441
Fire-escape	H. Huth	191,762	June 12, 1877	243	77	11	1015
Fire-escape	F. Jakel	195,134	Sept. 11, 1877	392	118	12	463
Fire-escape	M. Kertson	198,026	Dec. 11, 1877	323	100	12	1002
Fire-escape	W. H. Knowlton	194,443	Aug. 21, 1877	687	205	12	339
Fire-escape	A. G. Knox	195,024	Sept. 11, 1877	280	85	12	446
Fire-escape	E. B. Lake	190,342	May 1, 1877	224	67	11	775
Fire-escape	F. and W. H. Lewis and D. O. Holman.	193,259	July 17, 1877	729	222	12	127
Fire-escape	T. Lyness and J. P. Dunne	188,525	Mar. 20, 1877	577	178	11	473

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Fire-escape	R. J. Macdonald	192,176	June 19, 1877	680	208	11	1083
Fire-escape	A. McCambridge	191,455	May 29, 1877	1372	414	11	959
Fire-escape	G. W. McKee	198,649	Dec. 25, 1877	973	296	12	1111
Fire-escape	E. R. Menzel	193,264	July 17, 1877	734	224, 225	12	127
Fire-escape	L. Meyer	192,339	June 26, 1877	879	265	11	1130
Fire-escape	T. A. Michie and J. W. Williams	192,778	July 3, 1877	221	64	12	42
Fire-escape	W. H. Park	198,499	Dec. 25, 1877	829	251	12	1090
Fire-escape	C. Palatini	193,176	July 17, 1877	636	193	12	115
Fire-escape	J. C. Peppler	191,777	June 12, 1877	259	82	11	1017
Fire-escape	A. S. Philbrook	195,161	Sept. 11, 1877	421	125	12	467
Fire-escape	W. C. Pulaski	188,817	Mar. 27, 1877	881	268	11	523
Fire-escape	B. A. Richardson	193,895	Aug. 7, 1877	94	30	12	247
Fire-escape	T. K. Ricketts	192,976	July 10, 1877	396	118	12	75
Fire-escape	J. Riesdorph	195,401	Sept. 18, 1877	666	197	12	510
Fire-escape	W. Roberts and M. E. Benjamin	194,536	Aug. 28, 1877	788	234	12	362
Fire-escape	J. Rock and J. Colas	191,786	June 12, 1877	365	112	11	1029
Fire-escape	S. Root	197,899	Dec. 4, 1877	192	58	12	973
Fire-escape	E. Row	191,181	May 22, 1877	1101	329	11	914
Fire-escape	J. A. Schultz	194,471	Aug. 21, 1877	717	214	12	344
Fire-escape	W. P. Sheets	194,474	Aug. 21, 1877	720	214	12	344
Fire-escape	O. Sherwood, jr	190,085	Apr. 24, 1877	1124	342	11	729
Fire-escape	G. N. Shishmanian	195,052	Sept. 11, 1877	309	94	12	450
Fire-escape	W. H. H. Sisum	191,480	May 29, 1877	1400	422	11	962
Fire-escape	J. H. Spencer	188,312	Mar. 13, 1877	353	111	11	434
Fire-escape	G. S. Staples	194,625	Aug. 28, 1877	864	257	12	373
Fire-escape	W. W. Stead	188,266	Mar. 13, 1877	306	97	11	428
Fire-escape	T. F. Stevenson	197,059	Nov. 13, 1877	342	101	12	817
Fire-escape	D. O. Strifler	197,232	Nov. 20, 1877	537	159	12	854
Fire-escape	G. J. A. Taggert	193,901	Aug. 7, 1877	101	32	12	249
Fire-escape	J. A. Tixier	187,569	Feb. 20, 1877	653	203	11	309
Fire-escape	J. A. Tixier	194,192	Aug. 14, 1877	425	128	12	298
Fire-escape	J. W. Tutewiler	196,607	Oct. 30, 1877	974	283	12	734
Fire-escape	J. J. Van Wie	194,507	Aug. 21, 1877	750	224	12	348
Fire-escape	H. K. and Z. Warner	196,172	Oct. 16, 1877	511	149	12	649
Fire-escape	A. Warth	192,548	June 26, 1877	1084	327	11	1147
Fire-escape	J. Welch	192,551	June 26, 1877	1087	329	11	1148
Fire-escape	J. F. Werner	186,070	Jan. 9, 1877	259	78	11	51
Fire-escape	G. L. Whaley and J. R. Hassler	198,720	Dec. 25, 1877	1038	316	12	1121
Fire-escape	W. Winkless	197,709	Nov. 27, 1877	1047	314	12	935
Fire-escape and extension-ladder	W. A. Hoyt	193,960	Aug. 7, 1877	159	49	12	256
Fire-escape and hanging scaffold	C. L. Behrens	194,322	Aug. 21, 1877	568	170	12	324
Fire-escape and spring bed-bottom	J. Kellner	194,153	Aug. 14, 1877	391	116	12	293
Fire-escape, Hydraulic	J. Gerard and A. Turnbull	190,573	May 8, 1877	473	140, 141	11	816
Fire-escape, Hydraulic	J. F. Greene	193,506	July 24, 1877	987	299	12	170
Fire-extinguisher	A. S. Austin	189,987	Apr. 24, 1877	1007	308	11	714
Fire-extinguisher	T. E. Connelly	196,563	Oct. 30, 1877	936	271	12	728
Fire-extinguisher	W. W. Crooker	192,862	July 10, 1877	331	98	12	65
Fire-extinguisher	T. Flagler	195,708	Oct. 2, 1877	17	5	12	563
Fire-extinguisher	C. F. Girard	190,026	Apr. 24, 1877	1059	322	11	721
Fire-extinguisher	C. T. Holloway	193,955	Aug. 7, 1877	153	47	12	256
Fire-extinguisher	C. T. Holloway	195,370	Sept. 18, 1877	634	188	12	506
Fire-extinguisher	C. M. Martin	191,872	June 12, 1877	353	109	11	1028
Fire-extinguisher	H. O. Peters	192,083	June 19, 1877	589	179	11	1071
Fire-extinguisher	J. M. Pollard	192,005	June 12, 1877	485	149	11	1045
Fire-extinguisher	C. W. Talcott	196,055	Oct. 9, 1877	376	107	12	622
Fire-extinguisher, Chemical	A. E. Hughes	191,803	June 12, 1877	286	89	11	1020
Fire-extinguisher for car-stoves	J. M. Van Dyke	191,495	May 29, 1877	1425	429	11	964
Fire-extinguisher for vessels, &c., Chemical	A. M. Granger	185,913	Jan. 2, 1877	101	31	11	21
Fire-extinguisher, Hydro-pneumatic	C. C. Hearle	194,597	Aug. 28, 1877	840	250	12	370
Fire-extinguisher, Railway-car	W. H. Hotchkiss and W. D. Pegram.	195,892	Oct. 9, 1877	212	60	12	599
Fire-extinguishers, Generating carbonic-acid gas in	J. H. Connelly	196,562	Oct. 30, 1877	935		12	728
Fire-extinguishing apparatus	J. H. Connelly	196,632	Oct. 30, 1877	997	291	12	737
Fire-extinguishing apparatus, Automatic	A. Tenner	194,012	Aug. 7, 1877	215	64	12	263
Fire-extinguishing compound	F. Budy	191,306	May 29, 1877	1237		11	941
Fire-fender	R. R. Crouse	195,582	Sept. 25, 1877	851	253	12	545
Fire-front	G. W. Purcel	191,715	June 5, 1877	191	60	11	1062
Fire-heater	P. W. Cassil	191,310	May 29, 1877	1239	373	11	942
Fire-iron holder	E. E. Stow	196,103	Oct. 16, 1877	440	128, 129	12	639
Fire-iron stand	B. H. Connor	192,618	July 3, 1877	65	19	12	21
Fire-iron stand	W. E. Hague	195,213	Sept. 18, 1877	487	144	12	484
Fire-kindler	W. J. Boda	198,562	Dec. 25, 1877	884	269	12	1098
Fire-kindler	J. A. Conover	195,985	Oct. 9, 1877	309	86	12	612
Fire-kindler	J. G. Distler	191,572	June 5, 1877	59	18	11	984
Fire-kindler	G. W. Greenwood	186,833	Jan. 30, 1877	1037	320	11	182
Fire-kindler	C. H. Hayden	189,310	Apr. 10, 1877	310	98	11	607
Fire-kindler	A. Matchett	198,133	Dec. 11, 1877	432	135	12	1017
Fire-kindler	S. W. Mather	187,399	Feb. 13, 1877	479	149	11	279
Fire-kindler	J. McFarland	186,593	Jan. 23, 1877	796	245	11	140
Fire-kindler	T. Park	189,901	Apr. 24, 1877	930	283	11	764
Fire-kindler	L. M. Reed	196,596	Oct. 30, 1877	966	290	12	732
Fire-kindler	O. A. Trevallee	188,697	Mar. 20, 1877	739	226	11	495
Fire-kindler	J. P. Wagner	197,188	Nov. 13, 1877	475	149	12	837
Fire-kindlers, Composition for	W. McArthur	196,918	Nov. 6, 1877	190	55	12	786
Fire-place	J. Adair	192,046	June 19, 1877	553	169	11	1067
Fire-place	S. B. Baker	188,838	Mar. 27, 1877	899	274	11	525
Fire-place	J. S. Linsley	186,013	Jan. 9, 1877	205	62	11	44
Fire-place	O. F. and O. C. Mehurin	193,341	July 24, 1877	831	255	12	149
Fire-place	H. F. Watson	186,399	Jan. 16, 1877	593	181	11	100
Fire-place fender	H. Adler	196,738	Nov. 6, 1877	2	1	12	761
Fire-place heater	C. M. Coulter	192,416	June 26, 1877	954	286	11	1130

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Fire-place beater	J. K. Dimmick	186,320	Jan. 16, 1877	499	153	11	91
Fire-place heater	S. Merrick	187,035	Feb. 6, 1877	114	38	11	218
Fire-place heater	L. A. Seitz	188,194	Mar. 6, 1877	232	72	11	410
Fire-place hood	H. Clayton	194,649	Aug. 28, 1877	884	264	12	376
Fire-place, Portable	T. C. Nativel	186,361	Jan. 16, 1877	556	169	11	96
Fire-place water-back	G. W. Moore	192,782	July 3, 1877	223	65	12	42
Fire-pot and water-heater, Combined	E. P. Doyen	196,884	Nov. 6, 1877	156	46	12	782
Fire-proof column	W. H. Drake and P. B. Wight	191,662	June 5, 1877	143	44	11	995
Fire-proofing composition	W. J. Ryckman	186,881	Jan. 30, 1877	1084		11	188
Fire-screen	W. E. Dodge, jr	196,342	Oct. 23, 1877	700	201	12	683
Fire-shield	W. T. Vose	186,444	Jan. 23, 1877	658	202	11	122
Fire-shield for theaters, &c	L. W. Wright	187,340	Feb. 13, 1877	423	133	11	272
Fire-shovels, Manufacture of	P. Kiefer	188,148	Mar. 6, 1877	181	55	11	404
Fires in car-stoves, Apparatus for extinguishing	L. O. Root and L. I. Baker	195,234	Sept. 18, 1877	511	149	12	488
Fireman's helmet and dress	J. Bechtold	196,862	Nov. 6, 1877	127	39	12	779
Fish and other traps	B. F. Smith	189,805	Apr. 17, 1877	810	250	11	680
Fish-hook	B. Edgar	196,648	Oct. 30, 1877	1019	296	12	740
Fish-hook, Snap	G. C. Miller	191,165	May 22, 1877	1084	324	11	912
Fish-hook, Spring	J. O. King	190,222	May 1, 1877	107	31	11	760
Fish, Pan for freezing	C. W. Gauthier	187,122	Feb. 6, 1877	195	64	11	229
Fish-scrap, Process and apparatus for drying	L. R. Cornell	192,740	July 3, 1877	179	52	12	37
Fish-scrap, Treating	S. L. Goodale	186,204	Jan. 16, 1877	397		11	77
Fish trap and bucket, Combined	J. M. Lasater	194,253	Aug. 14, 1877	481	145	12	305
Fish, Treating	C. Alden	186,093	Jan. 9, 1877	282		11	54
Fisherman's apron	A. J. Tower	193,054	July 10, 1877	511	153	12	90
Fishing, Artificial worm-bait for	W. H. Gregg	185,914	Jan. 2, 1877	105	31	11	22
Fishing-flies, Book for carrying	H. H. Holt	197,935	Dec. 11, 1877	236	72	12	988
Fishing float and sinker attachment	P. S. Redfield	188,755	Mar. 27, 1877	806	246	11	513
Fishing-line leader	W. T. Jahne and A. Moors	186,134	Jan. 9, 1877	318	97	11	59
Fishing-line reel	G. T. Copeland	195,578	Sept. 25, 1877	848	252	12	544
Fishing-line reel	F. J. Philbrook	191,813	June 12, 1877	297	92	11	1021
Fishing-seine	L. Bates	197,313	Nov. 20, 1877	616	182	12	865
Fishing-trap	S. M. Davis	188,503	Mar. 20, 1877	556	171	11	470
Flanging-machine	D. Morgan and W. Godley	192,448	June 26, 1877	982	295	11	1135
Flask: *See* Casting-flask. Powder-flask. Molders' flask.							
Flat and fluting iron, Self-heating	L. C. Jennings	194,438	Aug. 21, 1877	680	203	12	338
Flat-iron heater	S. B. Dinsmore	189,198	Apr. 3, 1877	163	57	11	581
Flat-iron heater	O. F. Monfort	190,237	May 1, 1877	120	35	11	762
Flat-iron heater and coffee-roaster combined	M. Stein	186,176	Jan. 9, 1877	358	109	11	64
Flat-iron heater and reflector	W. J. Cox	197,205	Nov. 20, 1877	512	151	12	850
Flavoring-powder	W. P. Clotworthy	186,712	Jan. 30, 1877	912		11	166
Flax-brake	J. H. Tabler	197,063	Nov. 13, 1877	345	102	12	818
Flax, hemp, &c., Machine for treating	N. De Landtsheer	190,476	May 8, 1877	381	111	11	804
Floating-bath structure	F. Despoix and J. Reboul	194,808	Sept. 4, 1877	54	18	12	407
Flock-cutting machine	E. D. and A. S. Wilcox	198,440	Dec. 18, 1877	756	229	12	1071
Flood-gate	G. S. Houghton	197,471	Nov. 27, 1877	790	236	12	901
Flood-gate	N. J. Sweeney	192,470	June 26, 1877	1000	301	11	1137
Flood-gate and fence	A. Watson	193,358	July 24, 1877	848	260	12	151
Floor clamp	W. H. Tarrant	187,066	Feb. 6, 1877	141	47	11	222
Floor-cloth from rubber, Manufacture of	J. H. Hayward	196,147	Oct. 16, 1877	490		12	646
Floor-coverings and wainscoting, Manufacture of ornamental wood-surfaced.	S. P. Groocock	192,913	July 10, 1877	377	112	12	71
Floor, Fire-proof	E. Gleason	196,750	Nov. 6, 1877	14	4	12	762
Floor, Fire-proof	J. H. Hoyt	197,781	Dec. 4, 1877	78	24	12	957
Floor for buildings, Fire-proof	J. J. Egan and H. W. Hill	195,996	Oct. 9, 1877	319	90	12	614
Floor-protector	W. W. Wadsworth	196,319	Oct. 23, 1877	678	195	12	680
Floor, Spring	W. H. Clark	194,580	Aug. 28, 1877	827	246	12	368
Flooring	O. S. Dickinson	186,463	Jan. 23, 1877	475	207	11	124
Flour and pastry cupboard and kneading-board combined.	F. M. Mahan	189,479	Apr. 10, 1877	468	147 148	11	627
Flour, Apparatus for reducing cereals into	V. Ryerson	189,959	Apr. 24, 1877	981	300 301	11	711
Flour bin and sifter combined	F. M. Mahan	191,694	June 5, 1877	172	54	11	999
Flour-bolt	J. S. Detwiler	193,933	Aug. 7, 1877	134	41	12	253
Flour-bolting machine	F. Feistel	190,202	May 1, 1877	89	25, 26	11	158
Flour-bolting machine	P. B. and A. B. Sprenkle	191,482	May 29, 1877	1401	422	11	962
Flour-bolting machine	F. G. Wallace	195,192	Sept. 11, 1877	452	135	12	472
Flour-chest and bread-table, Combined	W. A. Barnes	188,566	Mar. 20, 1877	610	189	11	478
Flour, Manufacture of	C. R. Knickerbocker	194,356	Aug. 21, 1877	600	180	12	328
Flour, Manufacturing corn	A. L. Murdock	192,525	June 26, 1877	1061		11	1144
Flour-packer	F. Wolf	197,533	Nov. 27, 1877	859	255 256	12	910
Flour, Process and machinery for manufacture of	C. M. Roberts	193,039	July 10, 1877	495	149 150	12	88
Flower and merchandise stand	D. M. Haight	197,931	Dec. 11, 1877	232	71	12	988
Flower bracket and stand	J. T. Lambert	196,096	Oct. 16, 1877	434	126	12	638
Flower-pot	J. F. Alt	193,908	Aug. 7, 1877	106	34	12	249
Flower-pot	J. A. Conway	197,765	Dec. 4, 1877	62	20	12	955
Flower-pot	J. Crowther	195,094	Sept. 11, 1877	353	107	12	457
Flower-pot	W. F. Russell	196,937	Nov. 6, 1877	212	61	12	789
Flower-pot supporter	W. F. Sampson	191,183	May 22, 1877	1102	329	11	915
Flower-stand	C. F. Hall	190,580	May 8, 1877	479	143	11	817
Flower-stand	J. Harper	194,677	Aug. 28, 1877	911	272	12	380
Flower-stand, Folding	S. R. Pay	189,571	Apr. 17, 1877	578	179	11	650
Flower-stand, Sectional folding	L. Falk	194,663	Aug. 28, 1877	898	268	12	378
Flower-vase, Self-watering	C. H. Crater	195,580	Sept. 25, 1877	849	252	12	544
Flowers, Artificial	S. Potts	190,248	May 1, 1877	130	39	11	763
Flowers, &c., upon wire stems, Machine for mounting	L. L. Lowinsohn	189,759	Apr. 17, 1877	768	235 236	11	674
Flue-cleaner	G. W. Clough	187,255	Feb. 13, 1877	337	107	11	260
Flue cleaner, Boiler	J. S. Smith	189,666	Apr. 17, 1877	669	207	11	662
Flue thimble-tile, Stove	W. Kendall	190,145	May 1, 1877	34	10	11	151

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Fluid-can	W. McClave	193,016	July 10, 1877	471	142	12	85
Fluid-meter	C. E. Lipe	194,523	Aug. 28, 1877	776	231	12	361
Fluid-meter	C. M. Van Tine	191,205	May 22, 1877	1126	337	11	918
Fluid-pressure, Apparatus for automatically reducing or regulating.	G. F. Deacon	192,487	June 26, 1877	1015	307	11	1139
Fluid-trap	A. H. Thorp	188,440	Mar. 13, 1877	484	150	11	451
Fluids under pressure, Vessel for containing	C. H. Wilder	196,408	Oct. 23, 1877	761	219	12	693
Flume for establishing permanent channels in rivers, &c.	M. J. Adams	195,201	Sept. 18, 1877	475	141	12	483
Fluting and polishing iron	A. D. Grose	195,212	Sept. 18, 1877	486	143	12	484
Fluting and polishing iron	C. Johnson	191,684	June 5, 1877	165	51	11	998
Fluting and smoothing iron	H. E. Crocker and G. C. Farnsworth.	188,598	Mar. 20, 1877	640	198	11	483
Fluting-iron	B. B. Bignall	189,546	Apr. 17, 1877	551	171	11	647
Fluting-iron	J. H. Cleveland	196,878	Nov. 6, 1877	149	44	12	781
Fluting-iron	T. E. King	187,715	Feb. 27, 1877	818	254	11	340
Fluting-machine	H. B. Adams	196,066	Oct. 16, 1877	398	115	12	633
Fluting-machine	C. Felder	193,113	July 17, 1877	585	176	12	107
Fluting-machine	J. Keller and A. Olmesdahl	191,595	June 5, 1877	77	23	11	987
Fluting-machine	T. M. Tucker	185,876	Jan. 2, 1877	61	19	11	16
Fluting-machine	J. E. Wilson	188,558	Mar. 20, 1877	662	186	11	477
Fluting-machines, Clamping device for	H. Albrecht	192,632	July 3, 1877	78	23	12	23
Flux, Composition	C. F. Secor	189,271	Apr. 3, 1877	238		11	590
Fly-trap	F. M. Carroll and J. Lamb	191,652	June 5, 1877	133	42	11	994
Fly-trap	J. T. Guthrie	192,578	July 3, 1877	24	7	12	15
Fly-trap, Portable	F. F. Thedens	198,255	Dec. 18, 1877	588	178	12	1046
Fly-wheels, &c., Device for balancing	C. Seymour	189,506	Apr. 10, 1877	493	155	11	631
Flying-machine	F. Barnett	190,730	May 15, 1877	659	195	11	847
Flying-machine	J. J. Pennington	194,841	Sept. 4, 1877	83	27	12	412
Fog-horn	P. Thompson	189,587	Apr. 17, 1877	595	184	11	652
Fog-signal	G. Sweanor	194,937	Sept. 4, 1877	182	56	12	425
Folding arm-chair	W. A. Webb	191,015	May 22, 1877	947	280	11	893
Folding boat	J. H. Bates	189,913	Apr. 24, 1877	940	287	11	705
Folding boat, Portable	C. F. Prentice	192,007	June 12, 1877	488	150	11	1045
Folding chair	H. Closterman, jr	190,827	May 15, 1877	741	220	11	859
Folding chair	H. Closterman, jr	193,925	Aug. 7, 1877	123	38	12	251
Folding chair	A. B. Cogswell	195,576	Sept. 25, 1877	846	251	12	544
Folding chair	I. N. Dann	191,408	May 29, 1877	1321	401	11	953
Folding chair	X. Earle	198,006	Dec. 11, 1877	307	94	12	999
Folding chair	S. C. Hopkins	194,433	Aug. 21, 1877	676	202	12	338
Folding chair	B. F. Little	186,353	Jan. 16, 1877	548	166 167	11	95
Folding chair	B. F. Little	191,689	June 5, 1877	168	52	11	999
Folding chair	W. Lovell	192,380	June 26, 1877	922	276	11	1126
Folding chair	E. H. Mahoney	190,974	May 22, 1877	904	268	11	888
Folding chair	G. McAleer	196,688	Oct. 30, 1877	1054	305 306	12	744
Folding chair	G. McAleer	196,689	Oct. 30, 1877	1054	306	12	744
Folding chair	E. S. Pratt	195,396	Sept. 18, 1877	662	196	12	509
Folding chair	J. Richardson	192,284	June 19, 1877	797	243	11	1098
Folding chair	D. N. Selleg	198,418	Dec. 18, 1877	735	222	12	1068
Folding chair	E. Smith	188,969	Mar. 27, 1877	1026	315	11	543
Folding chair	W. H. Sternberg	194,381	Aug. 21, 1877	620	186 187	12	331
Folding chair	C. L. Stevens and I. Wallace	189,964	Apr. 24, 1877	988	302	11	712
Folding chair	C. H. Sutherland	195,545	Sept. 25, 1877	815	242	12	539
Folding chair	E. W. Vaill	187,787	Feb. 27, 1877	889	277	11	349
Folding chair	J. E. Wakefield	195,547	Sept. 25, 1877	817	242	12	540
Folding chair	J. E. Wakefield	195,548	Sept. 25, 1877	818	243	12	540
Folding chair	J. E. Wakefield	195,549	Sept. 25, 1877	819	243	12	540
Folding chair	J. A. Ware	187,944	Feb. 27, 1877	1042	321	11	369
Folding chair	J. J. Weller	188,324	Mar. 13, 1877	367	115	11	436
Folding crate	G. Robinson, jr	191,371	May 29, 1877	1287	389	11	949
Folding-machine	S. D. Tucker	191,819	June 12, 1877	303	94, 95	11	1021
Folding-machine	S. D. Tucker	192,034	June 12, 1877	514	157 158 159	11	1049
Folding-machine	S. D. Tucker	192,035	June 12, 1877	519	159 160	11	1050
Folding seat	A. B. Cogswell	187,817	Feb. 27, 1877	911	286	11	352
Folding-table	G. W. Gates	192,252	June 9, 1877	766	233	11	1004
Food, Composition	J. T. Cragin	190,472	May 8, 1877	378		11	803
Food for animals, Prepared	W. H. Bowker and T. L. Sturtevant.	195,479	Sept. 25, 1877	758		12	531
Foot-power	F. Millward	192,272	June 19, 1877	786	239	11	1096
Foot-power machine	G. W. Brown	198,272	Dec. 18, 1877	602	182	12	1048
Foot-warmer	W. T. Steiger	186,962	Feb. 6, 1877	49	17	11	208
Foot-warmer	F. L. Stewart	196,497	Oct. 23, 1877	852	245	12	704
Forge	H. H. Hoff	198,387	Dec. 18, 1877	705	214	12	1063
Forge, Portable	W. E. Canedy and F. Larson	192,975	July 10, 1877	435	120	12	80
Forging adz-eye tools, Die for	D. Maydole	196,917	Nov. 6, 1877	190	55	12	786
Fork: *See* Agricultural fork. Hay-fork. Egg-fork. Pickle-fork. Grain-fork. Table-fork.							
Foundery apparatus	J. P. Broadmeadow	197,960	Dec. 11, 1877	260	80, 81	12	992
Fountain: *See* Aerated fountain. Printing-press ink-fountain. Portable fountain.							
Fountain	W. J. and W. H. Clark	192,152	June 19, 1875	660	202	11	1080
Fracture apparatus	J. T. Woods	198,723	Dec. 25, 1877	1042	317	12	1121

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Frame:							
See Advertising-frame.							
Awning-frame.							
Carriage dash-frame.							
Carriage-light frame.							
Corkscrew-frame.							
Electroplating-frame.							
Engine-frame.							
Eyeglass-frame.							
Hammock and cot frame.							
Heddle-frame.							
Hop-frame.							
Metal car-frame.							
Mosquito-net frame.							
Orthographic and numerical frame.							
Photographic and numerical frame.							
Piano-action frame.							
Picture-frame.							
Pocket-book frame.							
Quilting-frame.							
Slate-frame.							
Spectacle-frame.							
Spinning-frame.							
Spinning and twisting frame.							
Stove-caster frame.							
Stretcher-frame.							
Traveling-bag frame.							
Umbrella-frame.							
Window-frame.							
Frame-corner	J. E. Goodrich	190,028	Apr. 24, 1877	1061	323	11	721
Frame house	H. E. Fickett	187,528	Feb. 20, 1877	620	192	11	304
Frame houses, Wind-anchor for	R. Tobin	188,442	Mar. 13, 1877	488	151	11	452
Freight-chute	W. C. Crompton, J. Nicol, and R. Hawley, jr.	195,489	Sept. 25, 1877	765	225	12	532
Friction-wheel	E. Brauer	186,304	Jan. 16, 1877	482	148	11	88
Fringe	M. Laudenberger	188,804	Mar. 27, 1877	866	264	11	521
Fringe, Knitted	E. Greasly	195,599	Sept. 25, 1877	869	258	12	547
Fruit and jelly press	J. W. Powers	186,162	Jan. 9, 1877	343	105	11	63
Fruit and paint can	W. H. Fowler	186,333	Jan. 16, 1877	528	160	11	93
Fruit-bag	A. Larkin	188,153	Mar. 6, 1877	186	57	11	405
Fruit-basket	L. W. Beecher	198,446	Dec. 25, 1877	777	236	12	1083
Fruit-basket	C. C. Roberts	186,759	Jan. 30, 1877	955	297	11	172
Fruit-can	J. F. Merrill	188,477	Mar. 20, 1877	532	164	11	467
Fruit-conductor	I. W. Curtis	190,559	May 8, 1877	459	136	11	814
Fruit-crate	E. Hopkins	197,470	Nov. 27, 1877	789	286	12	900
Fruit-crate	J. H. Marvil	190,883	May 15, 1877	792	235	11	865
Fruit-crate	R. G. Ross and F. A. L. Cassidey	187,178	Feb. 6, 1877	244	80	11	236
Fruit-crate	W. Wells	188,449	Mar. 13, 1877	491	153	11	453
Fruit-crate	G. Willard	191,739	June 5, 1877	213	67	11	1005
Fruit-drier	R. B. Blowers	187,349	Feb. 13, 1877	430	135	11	273
Fruit-drier	R. B. Blowers	191,303	May 29, 1877	1235	371	11	941
Fruit-drier	J. H. Brown	185,890	Jan. 2, 1877	76	23	11	18
Fruit-drier	L. C. Church and J. C. Perkins	193,924	Aug. 7, 1877	121	38	12	251
Fruit-drier	J. R. Dodge, jr.	190,748	May 15, 1877	675	200	11	849
Fruit-drier	W. M. Eddelman	191,324	May 29, 1877	1251	377	11	944
Fruit-drier	W. W. Ferguson	194,813	Sept. 4, 1877	58	19	12	408
Fruit-drier	L. Granger	187,844	Feb. 27, 1877	949	294	11	356
Fruit-drier	S. R. Griffith	193,243	July 17, 1877	712	218	12	124
Fruit, &c., drier	G. Harris	193,947	Aug. 7, 1877	147	45	12	254
Fruit-drier	C. W. and E. A. Jones	192,513	June 26, 1877	1049	316	11	1143
Fruit-drier	J. M. Keeler	189,472	Apr. 10, 1877	463	145	11	627
Fruit-drier	H. Kelly and D. Cole	190,685	May 15, 1877	610	181	11	841
Fruit-drier	T. R. Kendall	189,746	Apr. 17, 1877	754	231	11	672
Fruit-drier	S. Myers	189,952	Apr. 24, 1877	974	298	11	710
Fruit-drier	S. Myers	197,562	Nov. 27, 1877	887	264	12	914
Fruit-drier	W. S. Plummer	191,072	May 22, 1877	998	297	11	900
Fruit-drier	W. S. Plummer	195,948	Oct. 9, 1877	271	76	12	607
Fruit-drier	H. B. Smith	198,422	Dec. 18, 1877	739	223	12	1068
Fruit-drier	O. N. Smith	188,972	Mar. 27, 1877	1028	316	11	543
Fruit-drier	D. Stutzman	192,307	June 19, 1877	828	252	11	1102
Fruit-drier	J. Zimmorman	192,043	June 12, 1877	529	162	11	1051
Fruit-drier, Automatic	A. Q. Reynolds	190,368	May 1, 1877	247	73, 74	11	778
Fruit-drier, Automatic	J. H., A. Q., and A. J. Reynolds.	187,905	Feb. 27, 1877	1006	311	11	364
Fruit-gatherer	I. Clark	191,833	June 12, 1877	320	99	11	1024
Fruit-gatherer	A. J. Shunk	187,491	Feb. 20, 1877	587	182	11	300
Fruit-grinder	H. Kelly	188,059	Mar. 6, 1877	99	30	11	394
Fruit-jar	A. Dickey	187,827	Feb. 27, 1877	930	288	11	354
Fruit-jar	C. Hastings	191,050	May 22, 1877	980	291	11	897
Fruit-jar	J. L. Mason	189,316	Apr. 10, 1877	318	100	11	608
Fruit-jar	J. A. Nichols	187,406	Feb. 13, 1877	485	151	11	280
Fruit-jar	T. G. Otterson	190,612	May 8, 1877	510	152	11	820
Fruit-jar	H. Purdy	192,453	June 26, 1877	987	297	11	1135
Fruit-jar	H. Purdy	194,617	Aug. 28, 1877	858	255	12	373
Fruit-jar	J. T. Schaffer	186,629	Jan. 23, 1877	830	256	11	145
Fruit-jar	T. F. Woodward	198,528	Dec. 25, 1877	856	260	12	1094
Fruit-jar cover	W. G. Whitman	198,439	Dec. 18, 1877	755	228	12	1071
Fruit-jar, Self-sealing	T. Earle and F. H. Perry	189,713	Apr. 17, 1877	715	220	11	668
Fruit-jars, &c., Tool for forming lugs in the necks of	W. Hirt and J. Mahler	192,569	June 26, 1877	1042	313	11	1142
Fruit-picker	H. C. Berbeyer	194,323	Aug. 21, 1877	569	170	12	324
Fruit-picker	T. Boyd	186,921	Feb. 6, 1877	3	1	11	203
Fruit-picker	J. C. Stribliug	193,733	July 31, 1877	1232	369	12	214
Fruit-press	G. A. Newsam	194,457	Aug. 21, 1877	701	209	12	342
Fruit-press	G. Weber	195,064	Sept. 11, 1877	320	97	12	452
Fruit-press, Hand	A. V. M. Sprague	188,073	Mar. 6, 1877	111	34	11	395
Fruits and vegetables, Coloring	F. Lecourt and A. Guillemare	192,771	July 3, 1877	212		12	41
Fruits, vegetables, &c., Process and apparatus for canning.	W. A. Wicks	192,803	July 3, 1877	248	73	12	45
Fuel, Artificial	S. Cabot, jr	187,508	Feb. 20, 1877	604		11	302
Fuel, Artificial	W. C. A. Roettgerr	190,724	May 15, 1877	654		11	847
Fuel-box	C. Gunner	195,121	Sept. 11, 1877	381	114	12	461
Fuel-composition	C. M. Adams	189,985	Apr. 24, 1877	1006		11	714
Fuel, Composition for artificial	J. Q. A. Ziegler	189,413	Apr. 10, 1877	407		11	620
Fuel, Machine for bunching hay for	M. E. Getter	193,942	Aug. 7, 1877	143	43	12	254

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Fuel, Machine for pressing corn-stalks, &c., for	E. P. and J. E. Davis and J. J. Fisk.	191,571	June 5, 1877	58	17	11	984
Fuel, Machine for pressing corn-stalks for	E. P. Davis	193,693	July 31, 1877	1200	359	12	209
Fuel, Machine for pressing hay, &c., for	J. E. Hackett	193,159	July 17, 1877	621	189	12	113
Fuel, Machine for winding hay into rolls for	E. Harding	189,097	Apr. 3, 1877	75	27	11	569
Fuel or kindler, Artificial	A. P. Gotham	196,656	Oct. 30, 1877	1026	298	12	740
Fulling-mill	C. T. Colby	187,820	Feb. 27, 1877	924	287	11	353
Fulling-mill	R. Eickemeyer	195,810	Oct. 2, 1877	114	34	12	577
Fulling-mill	J. Hunter	191,592	June 5, 1877	75	23	11	986
Fumigator	G. T. Blanchard	189,915	Apr. 24, 1877	942	288	11	706
Funnel, Measuring	J. N. Berg	194,887	Sept. 4, 1877	128	39	12	418
Fur from pelts and hides, Machine for separating	S. M. Ball	198,558	Dec. 25, 1877	881	268	12	1098
Fur from pelts and hides, Machine for separating	L. Hollingsworth	188,295	Mar. 13, 1877	337	106	11	431
Fur, Machine for separating	H. N. Fanton	196,521	Oct. 30, 1877	894	258	12	722
Furnace: *See* Air-heating furnace. Annealing-furnace. Boiler-furnace. Brick-kiln furnace. Charcoal-finery furnace. Cupola-furnace. Glass-furnace. Heating-furnace. Heating and puddling gas-furnace. Hot-air furnace. Hydro-carbon furnace. Kettle-furnace. Lead-furnace. Locomotive-furnace. Metallurgic-furnace. Ore-roasting furnace. Portable furnace. Puddling-furnace. Quicksilver-furnace. Regenerative gas-furnace. Reverberating-furnace. Reverberatory furnace. Shaft-furnace. Smelting-furnace. Smoke and gas consuming furnace. Soldering and heating furnace. Soldering-iron heating furnace. Welding-furnace.							
Furnace	H. W. Austin and W. B. Hosford	191,746	June 12, 1877	231	73	11	1013
Furnace	J. Jenkins	191,005	May 22, 1877	937	277	11	892
Furnace and stove	J. J. Jarves	193,089	July 17, 1877	563	169	12	104
Furnace-door	R. Hill	194,908	Sept. 4, 1877	149	47	12	421
Furnace-door	T. W. Rodgers	191,474	May 29, 1877	1390	419	11	961
Furnace-door	J. Spinks	194,380	Aug. 21, 1877	619	186	12	331
Furnace-door for steam-engines, locomotives, &c.	J. M. Marshall	197,044	Nov. 13, 1877	327	97	12	815
Furnace-doors, Device for opening and closing	H. A. Stadler	194,008	Aug. 7, 1877	211	63	12	263
Furnace doorway for steam-boilers	J. T. Smith	187,922	Feb. 27, 1877	1025	316	11	366
Furnace dust-trap	T. J. Taylor	193,787	July 31, 1877	1292	388	12	222
Furnace fire-bar	E. and G. E. Rowland	189,789	Apr. 17, 1877	797	245	11	678
Furnace for burning coal-slack under steam-boilers, &c.	W. Sylvester	195,409	Sept. 18, 1877	474	200	12	511
Furnace for destroying garbage	E. B. English and W. H. Burr	195,495	Sept. 25, 1877	773	227	12	533
Furnace for producing heating-gases	P. W. Mackenzie	189,367	Apr. 10, 1877	362	117	11	614
Furnace-gases, Apparatus for purifying	J. Burt	188,852	Mar. 27, 1877	913	277	11	527
Furnace-grate	T. R. Botman	198,487	Dec. 25, 1877	817	248	12	1088
Furnace-grate	C. Deguine	191,002	May 22, 1877	933	276	11	891
Furnace-grate	B. Hershey	189,218	Apr. 3, 1877	183	62, 63	11	583
Furnace-grate	M. G. Imbach	192,070	June 19, 1877	579	175	11	1070
Furnace-grate	T. James	196,905	Nov. 6, 1877	175	51	12	784
Furnace-grate	A. Lawrence	192,073	June 19, 1877	581	176	11	1070
Furnace-grate	A. W. M. Moore	197,653	Nov. 27, 1877	979	292	12	927
Furnace-grate	L. P. Rider	193,180	July 17, 1877	639	194	12	115
Furnace, &c., grate	L. P. Rider	193,181	July 17, 1877	640	195	12	115
Furnace-grate bar	J. Ashcroft	197,510	Nov. 27, 1877	834	249	12	906
Furnace-grate bar	J. H. Blanchard	188,278	Mar. 13, 1877	319	101	11	429
Furnace-grate bar	L. P. Rider	186,436	Jan. 23, 1877	649	198	11	120
Furnace grate-bar, Boiler	P. J. Schmitt	190,377	May 1, 1877	257	76	11	780
Furnace-grates, Shaking and dumping	H. Rogers	193,897	Aug. 7, 1877	95	31	12	248
Furnace, stove, &c., grate	W. H. Warner	196,171	Oct. 16, 1877	510	149	12	648
Furnaces, Air and steam blower for	B. Hershey	187,381	Feb. 13, 1877	462	145	11	277
Furnaces, Air-feeding device for	H. C. Richmond	193,726	July 31, 1877	1225	368	12	213
Furnaces, Attachment for feeding straw to	L. C. Taber	196,839	Nov. 6, 1877	101	31	12	775
Furnaces, Automatic feeder for	E. F. Littlepage	188,647	Mar. 20, 1877	690	212	11	489
Furnaces, Automatic fuel-feeder for	R. Morgan	196,924	Nov. 6, 1877	197	57	12	787
Furnaces, Bridge-wall attachment for	T. King, jr	187,391	Feb. 13, 1877	472	147	11	278
Furnaces, Device for feeding steam to	W. Ramsey	190,367	May 1, 1877	246	73	11	778
Furnaces, Device for heating and feeding air to	J. Jenks	188,914	Mar. 27, 1877	971	297	11	536
Furnaces, Device for supplying air to	W. Halsted	189,096	Apr. 3, 1877	73	27	11	569
Furnaces, Device for supplying air to	H. F. Hayden	198,613	Dec. 25, 1877	934	284, 285, 286	12	1106
Furnaces, Device for supplying a steam and air blast to.	E. J. Jones	191,438	May 29, 1877	1350	409	11	957
Furnaces, Feeding air to	J. Jenks	188,913	Mar. 27, 1877	970	297	11	535
Furnaces, Heat-fender for	J. B. Chandler	186,797	Jan. 30, 1877	995	309	11	177
Furnaces, Heating and feeding air and steam to	W. Woolcock	187,743	Feb. 27, 1877	844	263	11	343
Furnaces, Regulator for controlling the flow of gas to.	G. M. Hopkins	194,775	Sept. 4, 1877	21	6	12	403
Furniture, Apparatus for raising and lowering articles of.	B. M. Wilkerson	197,707	Nov. 27, 1877	1045	313	12	935
Furniture, Buffer-bandle for	J. A. Whitaker	193,359	July 24, 1877	849	260	12	151
Furniture, Fastening device for	H. Schaaf	192,293	June 19, 1877	816	248	11	1100
Furniture-legs, Device for attaching	S. B. Alexander	196,413	Oct. 23, 1877	764	221	12	693
Furniture-legs, Device for securing	C. Hass	194,903	Sept. 4, 1877	145	45	12	420
Furniture, Machine for cutting escutcheons, &c., upon.	F. B. Mattson	194,451	Aug. 21, 1877	695	207	12	341
Furniture, School	M. W. Chase	198,352	Dec. 18, 1877	668	204	12	1058
Furniture-spring	J. H. Dustan and D. W. Akin	191,323	May 29, 1877	1250	376	11	944
Furniture-spring	H. H. Holmes	188,636	Mar. 20, 1877	677	209	11	487

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Furniture-spring	E. A. Turner	195,676	Sept. 28, 1877	941	281	12	557
Furniture-top	J. T. Bailey	187,344	Feb. 13, 1877	426	134	11	272
Furrowing out corn-ground	N. C. Hammell	188,624	Mar. 20, 1877	662	205	11	485
Fuse for projectiles, Percussion	M. Zeroni	194,210	Aug. 14, 1877	438	133	12	300
Fuse for shells, Percussion	E. H. Plumacher	193,345	July 24, 1877	835	256	12	149
Fuse, Percussion	B. B. Hotchkiss	190,861	May 15, 1877	771	229	11	863
G.							
Gage: *See* Axle-gage. Barrel-gage. Bit gage. Bolting-gage. Carpenter's gage. Gas-test gage. Leather-cutting gage. Pressure-gage. Rolling-mill roller-gage. Saw-mill adjustable gage. Test-gage. Tobacco-cutter gage. Tobacconist's gage. Water-gage.							
Gage	F. K. Hesse	191,053	May 22, 1877	981	292	11	898
Gage	F. J. Seybold	187,052	Feb. 6, 1877	130	43	11	220
Gage	B. F. Stoner	190,260	May 1, 1877	144	42	11	765
Gage	J. K. Underwood	190,933	May 15, 1877	843	250	11	872
Gage-glass	J. J. Paquette	189,778	Apr. 17, 1877	784	241	11	676
Gaging and centering tool	F. A. Rich	188,756	Mar. 27, 1877	806	246, 247	11	513
Gaiter, Congress	C. Libby	189,476	Apr. 10, 1877	466	147	11	627
Galley-support	P. A. Kelly	190,497	May 8, 1877	399	116	11	806
Galvanic battery	C. A. Hussey	195,762	Oct. 2, 1877	69	21	12	571
Galvanic battery	M. W. Parrish	189,779	Apr. 17, 1877	785	241	11	677
Galvanic battery	C. R. Jennison	190,684	May 15, 1877	608	180, 181	11	841
Game apparatus	W. E. Briggs	191,223	May 29, 1877	1161	348	11	931
Game apparatus	J. Brown	197,091	Nov. 13, 1877	381	112	12	822
Game apparatus	J. Harrington	196,356	Oct. 23, 1877	712	205	12	685
Game apparatus	J. Harrington	196,357	Oct. 23, 1877	713	205	12	685
Game apparatus	W. J. Lyman	196,982	Nov. 13, 1877	264	78	12	805
Game apparatus	F. E. Nutting	191,169	May 22, 1877	1088	326	11	912
Game apparatus	W. Pitman and C. F. Jacobson	186,872	Jan. 30, 1877	1077	333	11	187
Game apparatus	J. F. Spence	193,427	July 24, 1877	913	277	12	160
Game apparatus	B. F. Underwood	186,181	Jan. 9, 1877	364	111	11	65
Game-board	E. Worch	198,174	Dec. 11, 1877	470	147	12	1022
Game board, Parlor	G. Distler	196,114	Oct. 16, 1877	456	133	12	641
Game-counter	A. Pohl	194,172	Aug. 14, 1877	409	122	12	295
Game-counter	J. H. Tabony	196,499	Oct. 23, 1877	853	245	12	705
Game device	G. F. Kearney	185,934	Jan. 2, 1877	128	38	11	24
Game-table	G. Cooper	197,336	Nov. 20, 1877	643	190	12	869
Game-table	R. F. Lincke	194,522	Aug. 28, 1877	776	230	12	361
Garden-sprinkler	M. Hermes	194,907	Sept. 4, 1877	148	46	12	421
Garment-hanger	L. Hellman	186,559	Jan. 23, 1877	761	233	11	136
Garment-holding device	C. E. Johnson	191,152	May 22, 1877	107	321	11	910
Garment, Sample	L. E. Warner	186,282	Jan. 16, 1877	462	142	11	85
Garter	F. Armstrong	190,535	May 8, 1877	436	128	11	811
Garter	J. L. Moore	193,987	Aug. 7, 1877	188	57	12	260
Gas and water fittings, Chuck for	J. Powell	189,652	Apr. 17, 1877	654	203	11	660
Gas and water mains, Forming joints in	W. Painter	198,146	Dec. 11, 1877	441	138	12	1019
Gas and water pipes, Service-box for the shut-off cocks of.	W. H. Barns	194,402	Aug. 21, 1877	639	192	12	333
Gas and water regulator	W. D. Leavitt and B. J. Thurston	188,154	Mar. 6, 1877	187	58	11	405
Gas apparatus	J. Rigby	189,575	Apr. 17, 1877	581	180, 181	11	651
Gas apparatus	T. R. White	198,438	Dec. 18, 1877	754	228	12	1071
Gas apparatus, Dip-pipe for	J. Dittmar	191,121	May 22, 1877	1043	312	11	907
Gas, Apparatus for generating illuminating	C. G. Brewer	198,340	Dec. 18, 1877	656	199, 200	12	1056
Gas, Apparatus for generating illuminating	W. W. Upp	192,354	June 26, 1877	896	268	11	1122
Gas apparatus for heating tools	P. Bradley	191,921	June 12, 1877	399	124	11	1034
Gas, Apparatus for manufacturing	J. G. Hunt	186,207	Jan. 16, 1877	399	122	11	77
Gas, Apparatus for manufacturing	A. C. Lippitt	188,473	Mar. 20, 1877	528	163	11	466
Gas, Apparatus for manufacturing illuminating	W. S. Hill	193,407	July 24, 1877	892	273	12	157
Gas, Apparatus for producing illuminating	B. F. Greenough	189,727	Apr. 17, 1877	730	224, 225	11	670
Gas, Apparatus for the hydration of chlorine	W. Maynard	186,860	Jan. 30, 1877	1065	329	11	185
Gas, Apparatus for the manufacture of	W. Smith	197,420	Nov. 20, 1877	724	216	12	882
Gas, Apparatus for the manufacture of illuminating	I. Herzog	197,366	Nov. 20, 1877	670	200	12	874
Gas, Apparatus for the manufacture of illuminating	P. W. Mackenzie	191,808	June 12, 1877	291	90	11	1020
Gas, Apparatus for the manufacture of illuminating	T. Tully	197,001	Nov. 13, 1877	282	83	12	808
Gas-apparatus, Portable	D. H. Irland	191,531	June 5, 1877	24	7	11	979
Gas as a fuel, Apparatus for utilizing	W. Hainsworth	187,756	Feb. 27, 1877	855	266	11	344
Gas-brackets, Stop for swing	E. Langerfeld	198,304	Dec. 18, 1877	626	190	12	1052
Gas-brackets, Stop-work for swing	A. Langerfeld	198,125	Dec. 11, 1877	423	132	12	1016
Gas-burner	J. Anderson	188,836	Mar. 27, 1877	898	273	11	525
Gas-burner	J. F. Barker	186,920	Feb. 6, 1877	2	1	11	203
Gas-burner	W. and W. S. Bedell	193,845	Aug. 7, 1877	45	15	12	241
Gas-burner	F. D. Bliss	189,916	Apr 24, 1877	942	288	11	706
Gas-burner	E. Coe	187,512	Feb. 20, 1877	606	188	11	302
Gas-burner	T. B. Dexter	198,003	Dec. 11, 1877	304	93	12	998
Gas-burner	C. S. Ford	193,601	July 31, 1877	1102	330	12	196
Gas-burner	R. Hale	197,268	Nov. 20, 1877	570	168	12	859
Gas-burner	J. G. Hanning	193,604	July 31, 1877	1105	331	12	197
Gas-burner	J. Halstrick, jr	190,431	May 8, 1877	335	98	11	798
Gas-burner	W. G. Pugh	196,931	Nov. 6, 1877	204	59	12	788
Gas-burner	S. C. Salisbury	187,418	Feb. 13, 1877	499	154	11	281
Gas-burner	J. D. West and W. H. Darby	194,631	Aug. 28, 1877	868	259	12	374
Gas-burner	H. A. Whitney	191,498	May 29, 1877	1428	430	11	964
Gas-burner, Electric	A. L. Bogart	194,328	Aug. 21, 1877	574	172	12	324
Gas-burner, Electrical	E. A. Hill	195,358	Sept. 18, 1877	623	185	12	504
Gas-burner for producing heat	T. R. Almond	194,025	Aug. 14, 1877	247	73	12	275
Gas burner, Oil	C. G. Spengler	191,381	May 29, 1877	1296	392	11	950

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Gas-burner regulator	J. Cooper	197,998	Dec. 11, 1877	299	91	12	998
Gas burner regulator	E. Ginss	196,349	Oct. 23, 1877	706	203	12	685
Gas-burner regulator	T. F. McGann	194,877	Sept. 4, 1877	120	37	12	417
Gas-burner regulator	G. L. Shepard	196,489	Oct. 23, 1877	843	243	12	703
Gas-burner, Self-lighting	R. R. Moffatt	187,403	Feb. 13, 1877	482	150	11	279
Gas-burners, Automatic extinguisher for	T. T. Fryer	186,672	Jan. 30, 1877	874	270, 271	11	160
Gas-burners, Hydrocarbon-liquid attachment for	H. W. Dopp	190,673	May 15, 1877	599	178	11	840
Gas-cocks by electro-magnetism, Opening and closing.	D. M. Smyth	191,012	May 22, 1877	944	279	11	893
Gas-engine	R. D. Bradley	187,092	Feb. 6, 1877	168	55	11	225
Gas-engine	F. Dieckman	195,585	Sept. 25, 1877	853	253, 254	12	545
Gas-exhauster	R. and W. J. Salter	195,404	Sept. 18, 1877	668	198	12	510
Gas-exhausters, Apparatus for regulating the supply of steam to.	R. K. Huntoon	194,041	Aug. 14, 1877	261	77	12	277
Gas for heating and welding, Production of carbon-oxide.	W. S. Sutherland	194,501	Aug. 21, 1877	744		12	347
Gas from coal and oil, Process and apparatus for the manufacture of illuminating.	H. W. Adams	197,077	Nov. 13, 1877	361	106	12	820
Gas from petroleum, Apparatus for manufacturing	J. Rigby	186,692	Jan. 30, 1877	895	277	11	163
Gas from water, Apparatus for generating motive	R. D. Bradley	187,093	Feb. 6, 1877	171	55, 56	11	226
Gas-fuel, Preparing	M. N. Diall	188,082	Jan. 9, 1877	270		11	53
Gas-generating apparatus	J. S. Wood	194,798	Sept. 4, 1877	44	14	12	406
Gas-generator	T. S. Stewart	190,163	May 1, 1877	52	14, 15	11	753
Gas generator, Automatic carbonic-acid	F. W. Wiesebrock	190,396	May 1, 1877	286	84	11	783
Gas generator, Carbonic-acid	W. Gee	187,614	Feb. 20, 1877	699	217	11	315
Gas generator, Carbonic-acid	A. Kayser	186,089	Jan. 9, 1877	274	83	11	54
Gas generator, Carbonic-acid	O. Zwietusch	191,912	June 12, 1877	389	121	11	1033
Gas-governor	J. R. Blossom	186,299	Jan. 16, 1877	476	147	11	87
Gas-governor	W. Foulis	197,842	Dec. 4, 1877	136	41	12	965
Gas-governor	C. W. Isbell	193,515	July 24, 1877	997	301	12	171
Gas-governor	P. Munzinger	187,042	Feb. 6, 1877	120	40	11	219
Gas-governor	R. H. Plass and H. McManus	193,548	July 24, 1877	1031	310	12	176
Gas-holder	W. and R. H. Smith	190,918	May 15, 1877	827	245	11	870
Gas-key	A. G. Buzby	189,695	Apr. 17, 1877	697	215	11	606
Gas-lighter	E. Lindsley	188,807	Mar. 27, 1877	869	264, 265	11	521
Gas-lighter	E. T. Thomas	186,068	Jan. 9, 1877	258	78	11	51
Gas lighting and extinguishing device	E. Lindsley	196,981	Nov. 13, 1877	262	77	12	805
Gas lighting and extinguishing device	E. Lindsley	197,151	Nov. 13, 1877	437	129	12	831
Gas lighting and extinguishing apparatus, Time	T. Powers and J. B. Hulbert	197,403	Nov. 20, 1877	707	211, 212	12	880
Gas-lighting apparatus	R. R. Moffatt	197,879	Dec. 4, 1877	171	52	12	970
Gas-lighting apparatus	T. Powers	197,404	Nov. 20, 1877	708	212	12	880
Gas-lighting attachment, Electric	C. H. Hinds	186,243	Jan. 16, 1877	540	164	11	94
Gas-lime, Preventing the fouling of	F. A. Genth and G. F. Barker	194,299	Aug. 21, 1877	540		12	320
Gas-machine	F. W. Ofeldt	189,873	Apr. 24, 1877	901	276	11	700
Gas, Making illuminating	J. M. Leighton	191,980	June 12, 1877	402		11	1042
Gas, Manufacturing carbureted hydrogen	J. H. Bowman	191,740	June 12, 1877	234	74	11	1013
Gas, Manufacturing illuminating	H. Aitken	194,712	Dec. 4, 1877	1	1, 2	12	947
Gas, Manufacturing illuminating	H. Aitken and W. Young	198,725	Dec. 25, 1877	1044	318, 319	12	1122
Gas, Manufacturing illuminating	W. H. Tupper	189,971	Apr. 24, 1877	994	304	11	713
Gas, Manufacture of	T. B. Redwood	191,883	June 12, 1877	362		11	1029
Gas, Manufacture of	M. H. Strong	191,082	May 22, 1877	1007	300	11	902
Gas, Manufacture of	M. Williams	186,028	Jan. 2, 1877	218		11	46
Gas, Manufacture of illuminating	A. W. Wilkinson	193,002	July 10, 1877	518	156	12	91
Gas-meter	F. Kingmueller	198,122	Dec. 11, 1877	400	151	12	1015
Gas-motor engine	N. A. Otto	194,047	Aug. 14, 1877	266	79, 80	12	278
Gas-motor engine	N. A. Otto, F. W. and W. J. Crossley.	196,473	Oct. 23, 1877	821	236, 237, 238	12	701
Gas or lamp fixture	B. T. Steinhardt	195,854	Oct. 2, 1877	163	45	12	584
Gas pipe and burner for preventing frost on show-windows.	W. K. Chase	195,090	Sept. 11, 1877	350	106	12	456
Gas, Process and apparatus for generating and purifying.	M. W. Kidder	190,498	May 8, 1877	400	117, 118	11	806
Gas, Process and apparatus for manufacturing	J. Rigby	189,576	Apr. 17, 1877	583	181	11	651
Gas, Process and apparatus for manufacturing	S. C. Salisbury	187,734	Feb. 27, 1877	836	260	11	342
Gas, Process and apparatus for manufacturing illuminating.	J. Absterdam	189,166	Apr. 3, 1877	132	47	11	577
Gas, Process and apparatus for manufacturing illuminating.	M. W. Kidder	191,766	June 12, 1877	247	78	11	1015
Gas, Process and apparatus for the manufacture of	T. G. Springer	196,495	Oct. 23, 1877	850	244	12	704
Gas, Process and apparatus for the manufacture of	M. H. Strong	197,061	Nov. 13, 1877	343	101	12	818
Gas, Process and apparatus for the manufacture of	M. H. Strong	197,062	Nov. 13, 1877	344	102	12	818
Gas-purifier	P. Munzinger	186,747	Jan. 30, 1877	942	292	11	170
Gas purifying apparatus, Coal	J. D. Averell	194,636	Aug. 28, 1877	872	260	12	375
Gas, Raising and lowering	G. P. Ganster	197,772	Dec. 4, 1877	69	22	12	955
Gas-raking apparatus	T. F. Rowland	192,290	June 19, 1877	867	246, 247	11	1100
Gas-regulator	J. Bassemir	189,683	Apr. 17, 1877	688	212	11	664
Gas-regulator	G. E. Bingham	186,789	Jan. 30, 1877	989	307	11	176
Gas-regulator	A. F. Chace	191,402	May 29, 1877	1316	399	11	952
Gas regulator	I. Cook	196,196	Oct. 16, 1877	536	155	12	652
Gas-regulator	C. A. Fenn and R. Groeninger	195,596	Sept. 25, 1877	867	257	12	546
Gas-regulator	S. S. Jones	191,860	June 12, 1877	343	106	11	1027
Gas-regulator	A. Kipp, jr., and H. Murphy	188,740	Mar. 27, 1877	790	242	11	511
Gas, &c., regulator	J. E. Lewis	196,301	Oct. 23, 1877	659	190	12	678
Gas-regulator	E. O. Martin	187,026	Feb. 6, 1877	107	36	11	217
Gas-regulator	J. C. Schooley	196,255	Oct. 16, 1877	600	173	12	660
Gas-regulator	J. P. Warner	197,434	Nov. 20, 1877	739	221	12	884

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Gas-retort	A. W. M. Maas	193,979	Aug. 7, 1877	181	55	12	259
Gas-retort	G. W. Todd	188,553	Mar. 20, 1877	598	185	11	476
Gas-retort charger	T. F. Rowland	192,289	June 19, 1877	804	245 246	11	1099
Gas-retort cover	A. Schwarz	186,276	Jan. 16, 1877	458	141	11	85
Gas-retort lids, Fastening for	N. Jamin	190,867	May 15, 1877	779	231	11	864
Gas-retorts, mouth-piece and lid for	T. Ubil	192,884	July 10, 1877	352	104	12	68
Gas-retorts, Cooling apparatus for stand-pipes of	D. R. Shiras	192,944	July 10, 1877	405	121	12	76
Gas-retorts, Hinged cover for	P. Munzinger	187,768	Feb. 27, 1877	865	269	11	346
Gas-retorts, Machinery for charging	C. F. Dieterich	194,998	Sept. 11, 1877	252	76	12	442
Gas-shade holder	T. F. McGann	187,765	Feb. 27, 1877	863	269	11	345
Gas-test gage	D. M. Small	194,737	Aug. 28, 1877	968	287	12	388
Gas to heating apparatus, Electrical regulator for governing the flow of.	J. Davidson	198,084	Dec. 11, 1877	376	118 119	12	1010
Gas-washing apparatus	W. M. Cosh	193,397	July 24, 1877	883	270	12	156
Gas-works, By-pass valve for	P. Munzinger	191,877	June 12, 1877	358	110	11	1028
Gasket	C. S. Stoy	196,398	Oct. 23, 1877	753	217	12	691
Gasoline-burner	J. H. Bean	186,784	Jan. 30, 1877	977	304	11	175
Gasoline-burner	F. Marquart	188,527	Mar. 20, 1877	578	178	11	473
Gate: *See* Automatic gate. Bridge-gate. Canal-lock gate. Change-gate. End-gate. Farm-gate. Flood-gate. Molasses-gate. Railway-gate. Swinging gate. Turbine-gate.							
Gate	B. R. Baker	191,637	June 5, 1877	117	36	11	992
Gate	D. Barrett and J. F. Quinn	192,143	June 19, 1877	647	198	11	1078
Gate	L. C. Beckford	195,972	Oct. 9, 1877	294	82	12	610
Gate	N. M. Bell	187,804	Feb. 27, 1877	904	281	11	351
Gate	J. M. C. Bennett	193,913	Aug. 7, 1877	112	36	12	250
Gate	A. A. Brooks	194,889	Sept. 4, 1877	129	40	12	418
Gate	J. Bundy	192,971	July 10, 1877	431	129	12	80
Gate	M. Carter	197,599	Nov. 27, 1877	925	276	12	919
Gate	A. G. Cherry and A. T. Elliott	191,114	May 22, 1877	1037	310 311	11	906
Gate	J. W. Clark	197,828	Dec. 4, 1877	122	38	12	963
Gate	J. Coffits	186,662	Jan. 30, 1877	867	268	11	159
Gate	G. E. Cornell	188,342	Mar. 13, 1877	383	120	11	438
Gate	L. Dickerson	192,745	July 3, 1877	185	53	12	38
Gate	S. W. Erwin	198,588	Dec. 25, 1877	905	277	12	1102
Gate	J. U. Fiester	198,369	Dec. 18, 1877	687	209	12	1061
Gate	H. W. Goodwin	191,334	May 29, 1877	1258	379	11	945
Gate	F. Gordon	196,655	Oct. 30, 1877	1025	298	12	740
Gate	G. W. Gordon	197,845	Dec. 4, 1877	139	42	12	965
Gate	J. T. Guy	191,671	June 5, 1877	152	47	11	996
Gate	C. T. Harris	194,678	Aug. 28, 1877	912	272	12	380
Gate	J. W. Harvey	195,273	Sept. 18, 1877	550	160	12	493
Gate	S. B. Hilleary	195,279	Sept. 18, 1877	556	162	12	494
Gate	R. A. Horning	195,819	Oct. 2, 1877	126	86	12	579
Gate	R. H. Hudgin	194,682	Aug. 28, 1877	918	273	12	381
Gate	A. Hyre	194,823	Sept. 4, 1877	68	23	12	410
Gate	T. J. Ingels	194,685	Aug. 28, 1877	922	274	12	381
Gate	I. D. Jewett	191,151	May 22, 1877	1072	321	11	910
Gate	M. Kelter and P. Leickem	189,745	Apr. 17, 1877	753	231	11	672
Gate	J. E. Q. Maddox	191,984	June 12, 1877	465	143	11	1042
Gate	J. Manker	196,097	Oct. 16, 1877	435	127	12	638
Gate	L. T. Mason	194,876	Sept. 4, 1877	118	37	12	417
Gate	M. J. McPherson	196,159	Oct. 16, 1877	499	145	12	647
Gate	T. B. Piburn	192,003	June 12, 1877	482	148	11	1045
Gate	J. T. Piggott and A. W. Hoyt	192,185	June 19, 1877	690	211	11	1084
Gate	C. Pool	189,573	Apr. 17, 1877	579	180	11	651
Gate	F. Ran	192,009	June 12, 1877	491	150	11	1046
Gate	J. F. Read	193,777	July 31, 1877	1276	384	12	220
Gate	W. Rinehold	192,456	June 26, 1877	989	297	11	1135
Gate	K. E. Rudd	194,786	Sept. 4, 1877	32	10	12	405
Gate	K. E. Rudd	195,538	Sept. 25, 1877	810	240	12	539
Gate	D. Scherer	186,274	Jan. 16, 1877	456	140	11	84
Gate	G. H. Smith	197,906	Dec. 4, 1877	199	60	12	974
Gate	H. A. Stearns	194,312	Aug. 21, 1877	555	167	12	322
Gate	G. J. Tiusley	189,814	Apr. 17, 1877	817	252	11	681
Gate	E. Wayland	192,204	June 19, 1877	708	217	11	1087
Gate	W. L. Wills	195,864	Oct. 2, 1877	173	49	12	585
Gate	I. Yost	196,735	Oct. 30, 1877	1101	320	12	751
Gate-fastening	C. P. Snow	193,565	July 24, 1877	1050	315	12	178
Gate-hanger	N. H. Sherrill	193,559	July 24, 1877	1044	312	12	177
Gate-operating mechanism	A. R. Sherman	186,763	Jan. 30, 1877	959	298	11	172
Gear-cutting machine	G. H. Corliss	190,470	May 8, 1877	375	109	11	803
Gear, Rowing	J. W. Melcher	192,382	June 26, 1877	924	277	11	1126
Gear-wheel	D. Jones	191,155	May 22, 1877	1075	322	11	911
Gearing, Friction	D. H. Merritt	196,817	Nov. 6, 1877	79	24	12	772
Gearing, Machine	M. T. Singleton and J. S. Wingfield.	190,916	May 15, 1877	826	214	11	870
Gearing, Oscillating	N. P. Otis	191,705	June 5, 1877	182	57	11	1001
Gearing, Safety	E. Parker	192,656	July 3, 1877	107	30	12	27
Gearing, Screw	H. Hackman, jr	190,679	May 15, 1877	604	179	11	840
Gelatine capsules, Machine for cutting off	F. A. Hubel	187,279	Feb. 13, 1877	362	115	11	263
Gelatine, Recovering phosphoric acid used in manufacture of.	N. B. Rico	194,050	Aug. 14, 1877	271		12	278
Gem-setting	H. G. Mackinney	195,765	Oct. 2, 1877	72	21	12	571
Gems, Setting artificial	H. Pic and M. Nolson	195,304	Sept. 18, 1877	578	168	12	497
Generator: *See* Gas-generator. Ozone-generator. Steam-generator. Vinegar-generator.							

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Gimlet and twist drill	J. C. Richardson	189,265	Apr. 3, 1877	232	77	11	590
Ginger-snap press	A. H. Bell and N. Hills	189,178	Apr. 3, 1877	141	50	11	578
Girder and beam, Tubular	J. Johnson	192,170	June 19, 1877	674	206	11	1082
Glass:							
See Drinking-glass. Medicine-glass. Eyeglass. Opera-glass. Gage-glass. Picture-frame glass. Jelly-glass. Watch-glass.							
Glass-annealing furnace	J. Lowery	188,745	Mar. 27, 1877	796	244	11	512
Glass, Etching	W. Campbell	193,921	Aug. 7, 1877	119		12	251
Glass from the ends of blow-pipes, Cleaning	R. G. Hemingray	196,092	Oct. 16, 1877	428	125	12	637
Glass-furnace	P. Arbogast	188,328	Mar. 13, 1877	369	116	11	436
Glass-furnace	P. Arbogast	196,321	Oct. 23, 1877	679	196	12	681
Glass-furnace	D. Bennett	191,507	May 29, 1877	1435	432	11	966
Glass-furnace	J. Johnson	194,043	Aug. 14, 1877	263	78	12	277
Glass, Hardening, tempering, and pressing	F. Siemens	192,537	June 26, 1877	1072	{323 324	11	1146
Glass jars, insulators, &c., Forming female screw-threads in.	T. F. Woodward	196,733	Oct. 30, 1877	1098	320	12	751
Glass labels and apparatus therefor, Making	P. Arbogast	196,855	Nov. 6, 1877	121	37	12	778
Glass, Manufacture of	F. Siemens	189,800	Apr. 17, 1877	806	248	11	679
Glass-melting pot	A. Harcum	188,129	Mar. 6, 1877	161	49	11	402
Glass-mold for shade-holders and shades	H. Brooke	191,102	May 22, 1877	1028	307	11	904
Glass, Molding	S. Oakman	187,725	Feb. 27, 1877	826	257	11	341
Glass, Ornamented window	R. M. Tudor	191,270	May 29, 1877	1204	361	11	937
Glass, Ornamenting	C. J. Cartisser	192,679	July 3, 1877	134	37	12	30
Glass, Ornamenting	H. A. Goetz	185,917	Jan. 2, 1877	108	32	11	22
Glass panels, Ornamental	G. Bassett	197,240	Nov. 20, 1877	546	161	12	855
Glass pipes, Coupling for	H. P. Humphrey	189,041	Apr. 3, 1877	28	9	11	562
Glass pot	G. Kim	198,628	Dec. 25, 1877	953	290	12	1108
Glass shades, &c., Mold for	H. Brooke	191,103	May 22, 1877	1029	307	11	905
Glass shades, globes, &c., Manufacture of	J. Bourne	189,180	Apr. 3, 1877	143	51	11	579
Glass shades, Manufacture of	H. Brooke	191,224	May 29, 1877	1162	348	11	931
Glass-tool	G. Zimmerman and G. Beatty	191,793	June 12, 1877	275	85	11	1018
Glass vessel, Incased	D. W. Norris	195,385	Sept. 18, 1877	651	193	12	508
Glassware, Covered	C. L. Knecht	192,769	July 3, 1877	210	61	12	41
Glassware, Finishing	G. W. Blair	193,314	July 24, 1877	806	247	12	145
Glassware, Flaring-machine for	W. Buttlear	193,317	July 24, 1877	809	248	12	145
Glassware, Hinged top for	T. B. Atterbury	194,495	Aug. 21, 1877	739	220	12	346
Glassware, Machine for pressing rings on	J. Slim	195,411	Sept. 18, 1877	676	200	12	512
Glassware, Manufacture of	W. Fox	189,351	Apr. 10, 1877	346	111	11	612
Glassware, Manufacture of	C. L. Knecht	191,534	June 5, 1877	28	8	11	980
Glassware, Manufacture of hollow	J. Burgon	186,986	Feb. 6, 1877	74	25	11	211
Glassware, Mold for the manufacture of tubular or hollow articles of.	W. Beck	196,326	Oct. 23, 1877	684	197	12	681
Glassware, Ornamenting	A. Harcum	196,663	Oct. 30, 1877	1031	300	12	741
Globe, Educational	E. G. Durant	192,640	July 3, 1877	89	26	12	24
Globe, Time	L. P. Juvet	189,042	Apr. 3, 1877	29	10	11	563
Glove, Corn-husking	J. Peters	192,082	June 19, 1877	588	179	11	1071
Glove-fastener	H. Texier	191,266	May 29, 1877	1201	360	11	936
Glove-fastener	L. Bonesteel	194,069	Aug. 14, 1877	288	86	12	280
Glove-fastening	F. G. Farnham	195,355	Sept. 18, 1877	621	184	12	503
Glove, &c., fastening	T. Masac	187,879	Feb. 27, 1877	978	304	11	360
Glove wrist-clasp	N. Vrooman	197,751	Dec. 4, 1877	46	14	12	952
Glucose, Manufacture of	S. H. Johnson	186,935	Feb. 6, 1877	22	10	11	205
Glue-drying apparatus	S. T. Swasey	192,846	July 10, 1877	318	93	12	63
Glue, Manufacturing	C. O. Garrison	191,132	May 22, 1877	1056		11	908
Glue, Method and apparatus for cooling and spreading	C. O. Garrison	185,825	Jan. 2, 1877	11	4	11	10
Glue or gelatine, Treating wool oil or grease to obtain	H. Thaülow	189,149	Apr. 3, 1877	120		11	575
Glue-pot kettle	J. F. Lucas	193,010	July 10, 1877	465	141	12	84
Glue-stock, Treating bones for	W. Adamson	183,088	Mar. 6, 1877	122	36	11	397
Gold and silver bearing ores, Disintegrating solution for.	J. J. Luci	188,744	Mar. 27, 1877	795		11	512
Goods and passenger elevator	R. Schmidt	192,940	July 10, 1877	401	120	12	75
Goods-box, Convertible	C. A. Brown	197,595	Nov. 27, 1877	921	275	12	919
Governor	J. W. Collet	189,193	Apr. 3, 1877	159	55	11	580
Governor	W. N. Cosgrove and T. Mee	186,116	Jan. 9, 1877	302	91	11	57
Governor	F. W. Durham and H. Howse	188,876	Mar. 27, 1877	937	285	11	531
Governor	J. Judson	187,017	Feb. 6, 1877	99	34	11	215
Governor, Engine	A. W. Browne	189,663	Apr. 17, 1877	696	214	11	665
Governor for regulating the speed of machinery	J. S. Adams	195,322	Sept. 18, 1877	593	174	12	499
Governor for various purposes, Chronometric	E. H. Randall	190,077	Apr. 24, 1877	1117	339	11	728
Governor, Marine-engine	W. A. Brice	191,023	May 22, 1877	955		11	894
Governor, Marine-engine	J. W. Fowle	194,037	Aug. 14, 1877	257	76	12	276
Governor, Marine-engine	G. Steele	193,050	July 10, 1877	508	152	12	89
Governor, Steam-engine	P. Brotherhood	185,891	Jan. 2, 1877	77	23	11	18
Governor, Steam-engine	P. Cartière	193,481	July 24, 1877	960	292	12	167
Governor, Steam-engine	J. Kurten and L. Kramer	196,236	Oct. 16, 1877	580	167	12	658
Governor, Steam-engine	N. E. Nash	192,273	June 19, 1877	786	239	11	1097
Governor, Steam-engine	E. A. Sutcliffe	196,947	Nov. 6, 1877	217	64	12	790
Governor, Steam-engine	H. Tabor	191,084	May 22, 1877	1008	300	11	902
Governor, Steam-engine	E. Towns	198,711	Dec. 25, 1877	1030	313	12	1119
Governor, Steam-engine	S. A. West	189,289	Apr. 3, 1877	261	86	11	593
Governor, Water	C. Neab	190,154	May 1, 1877	44	12	11	152
Governors, Stop-motion for	L. Skinner	189,068	Apr. 3, 1877	53	20	11	566
Grafting-machine	E. Walters	186,219	Jan. 16, 1877	410	126	11	78
Grain and seed drill	E. Phillips and T. G. Dunbar	195,393	Sept. 18, 1877	658	195	12	509
Grain and seed separator	A. W. and C. T. Kendrick	186,578	Jan. 23, 1877	778	{240 241	11	138
Grain and seed separator	C. A. Weed	190,991	May 22, 1877	923	273	11	890
Grain, Apparatus for curing	H. H. Beach	190,809	May 15, 1877	723	214	11	856
Grain, Apparatus for curing	H. H. Beach	190,810	May 15, 1877	724	214	11	856
Grain, Apparatus for separating burgeons or germs from.	C. A. Duprez	186,328	Jan. 16, 1877	523	159	11	92

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Grain, Apparatus for separating stones, &c., from	J. Arbuckle	196,178	Oct. 16, 1877	519		12	650
Grain-band	F. Peteler	192,789	July 3, 1877	233	68	12	44
Grain-band	W. A. Sutphin	196,950	Nov. 6, 1877	221	65	12	791
Grain-binder	W. R. Baker	191,096	May 22, 1877	1017	303, 304, 305	11	904
Grain-binder	H. H. Bridenthal, jr	193,637	July 31, 1877	1140	341, 342	12	201
Grain-binder	H. H. Bridenthal, jr	196,626	Oct 30, 1877	989	288, 289	12	736
Grain-binder	J. E. Buxton	191,929	June 12, 1877	406	126	11	1035
Grain-binder	J. E. Buxton	191,928	June 12, 1877	404	126	11	1035
Grain-binder	E. Chapman	192,150	June 19, 1877	656	201	11	1079
Grain-binder	E. Chapman	192,151	June 19, 1877	658	201, 202	11	1080
Grain-binder	E. Chapman	197,016	Nov. 13, 1877	295	87	12	810
Grain-binder	H. Curtis	188,861	Mar. 27, 1877	921	280	11	528
Grain-binder	H. Curtis	195,098	Sept. 11, 1877	356	108	12	457
Grain-binder	E. Dederick	196,640	Oct. 30, 1877	1008	293	12	738
Grain-binder	E. H. Gammon, R. H. Dixon, and J. F. Steward.	192,575	July 3, 1877	18	6	12	15
Grain-binder	J. F. Gordon	194,817	Sept. 4, 1877	61	20, 21	12	409
Grain-binder	J. F. Gordon	198,104	Dec. 11, 1877	395	124, 125	12	1012
Grain-binder	J. H. Gordon	193,241	July 17, 1877	710	217	12	124
Grain-binder	G. F. Green	188,125	Mar. 6, 1877	153	46, 47, 48	11	401
Grain-binder	E. Heath	188,629	Mar. 20, 1877	665	206, 207	11	486
Grain-binder	G. W. Hobbs	196,452	Oct. 23, 1877	799	230, 231	12	698
Grain-binder	P. F. Hodges and F. S. Blim	189,221	Apr. 3, 1877	186	64	11	584
Grain-binder	J. F. Hollister	193,817	Aug. 7, 1877	21	7	12	237
Grain-binder	E. Horton	186,930	Feb. 6, 1877	10	3, 4, 5, 6	11	204
Grain-binder	E. Horton	186,931	Feb. 6, 1877	15	6, 7, 8	11	204
Grain-binder	E. Horton	186,932	Feb. 6, 1877	19	8, 9	11	204
Grain-binder	G. A. Houston	187,974	Mar. 6, 1877	18	5	11	383
Grain-binder	H. Hull	190,041	Apr. 24, 1877	1073	327	11	723
Grain-binder	J. P. Johnson	192,374	June 26, 1877	912	274, 275	11	1125
Grain-binder	D. McPherson	188,162	Mar. 6, 1877	193	59, 60	11	406
Grain-binder	S. Miller	186,056	Jan. 9, 1877	247	74, 75	11	50
Grain binder	W. H. Payne	191,776	June 12, 1877	257	81	11	1016
Grain-binder	F. W. Randall	190,515	May 8, 1877	419	122	11	809
Grain-binder	J. M. Rosebrooks	186,272	Jan. 16, 1877	455	139, 140	11	84
Grain-binder	L. A. Scovill	188,032	Mar. 6, 1877	74	21, 22	11	390
Grain-binder	J. F. Steward	191,264	May 29, 1877	1199	360	11	936
Grain-binder	J. F. Steward	192,603	July 3, 1877	47	14	12	19
Grain-binder	J. F. Steward	194,978	Sept. 11, 1877	230	71	12	440
Grain-binder	J. F. Steward	195,413	Sept. 18, 1877	677	201	12	512
Grain-binder	O. O. Storle	193,287	July 17, 1877	759	234	12	131
Grain-binder	W. A. Sutphin	196,949	Nov. 6, 1877	219	65	12	793
Grain-binder	W. A. Sutphin	197,182	Nov. 13, 1877	468	138, 139	12	836
Grain-binder	G. A. Walker	190,936	May 15, 1877	846	251	11	872
Grain-binder	N. Werts and J. G. Gilmer	190,993	May 22, 1877	925	273, 274	11	890
Grain-binder	C. B. Withington	186,186	Jan. 9, 1877	368	113, 114	11	65
Grain-binder	C. B. Withington	187,443	Feb. 13, 1877	527	162, 163	11	285
Grain-binder	C. B. Withington	189,165	Apr. 3, 1877	130	47	11	577
Grain-binder	C. B. Withington	196,775	Nov. 6, 1877	36	11	12	766
Grain-binder	E. Woodbury	194,117	Aug. 14, 1877	357	106	12	188
Grain-binders, Lever take-up for	T. H. Parvin	198,040	Dec. 11, 1877	336	104	12	1004
Grain-binding instrument	J. A. Pène	197,888	Dec. 4, 1877	180	55	12	971
Grain-cleaner	C. B. Slater	192,295	June 19, 1877	817	249	11	1101
Grain-cleaner and millstone-exhaust	M. K. Jones	194,439	Aug. 21, 1877	681	203, 204	12	339
Grain-conveyer	A. J. Emlaw	190,427	May 8, 1877	331	97	11	798
Grain-conveyer	F. D. Franks	197,264	Nov. 20, 1877	858	168	12	858
Grain conveyer and drier	W. H. Higbie	192,069	June 19, 1877	578	175	11	1070
Grain-conveyer, Belt	H. G. Seeber	194,182	Aug. 14, 1877	417	126	12	296
Grain-crusher	J. and R. Reid	190,250	May 1, 1877	132	39	11	764
Grain, &c., Disintegrating apparatus for	G. Mead	197,484	Nov. 27, 1877	802	239, 240	12	902
Grain-distributer	C. E. Drake	193,695	July 31, 1877	1201	360	12	209
Grain-distributer	J. W. Lewis	190,229	May 1, 1877	114	33	11	761
Grain-drier	J. Gardiola	187,268	Feb. 13, 1877	349	111	11	262
Grain-drier	T. S. Morris	193,267	July 17, 1877	738	226	12	128
Grain-drill	J. C. Baker	186,407	Jan. 23, 1877	620	189	11	117
Grain-drill	J. S. Bogle	197,085	Nov. 13, 1877	373	110	12	821
Grain-drill	J. S. Bogle	197,320	Nov. 20, 1877	624	184	12	866
Grain-drill	T. Brennan, J. Taylor, and J. T. Lynam.	193,075	July 17, 1877	536	162	12	101
Grain-drill	P. W. and H. G. Briggs	198,271	Dec. 18, 1877	601	182	12	1048
Grain-drill	M. M. Fitzgerrell	190,480	May 8, 1877	385	112	11	804
Grain-drill	J. P. Fulghum	196,652	Oct. 30, 1877	1023	297	12	740
Grain-drill	E. Kuhns	186,090	Jan. 9, 1877	276	83	11	51
Grain-drill	A. J. Martin	195,144	Sept. 11, 1877	400	120	12	464
Grain-drill	R. Montfort	197,880	Dec. 4, 1877	173	52	12	970
Grain-drill	G. W. Osborn	186,058	Jan. 9, 1877	250	75	11	50

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				Spec.	Dr'g.	Vol.	Page.
Grain-drill	C. E. Patric	189,383	Apr. 10, 1877	374	121	11	616
Grain-drill	A. Runyan	198,047	Dec. 11, 1877	341	106	12	1004
Grain-drill	C. F. Scholz	194,268	Aug. 14, 1877	496	150	12	307
Grain-drill distributer	C. E. Patric	188,404	Mar. 13, 1877	449	159	11	447
Grain-drill feeding device	H. Clayton	186,080	Jan. 9, 1877	268	81	11	53
Grain-drill feeding device	C. W. Wilde	188,454	Mar. 13, 1877	500	155	11	454
Grain-drill hoe-shifter	J. S. Bogle	195,477	Sept. 25, 1877	756	223	12	531
Grain drills and seeders, Force-feed for	A. J. Martin	198,495	Dec. 25, 1877	825	250	12	1089
Grain-drills, Peripheral force-feed for	A. J. Martin	194,307	Aug. 21, 1877	549	165	12	321
Grain-drills, Spring-hoe for	E. F. Stoddard	198,319	Dec. 18, 1877	638	194	12	1054
Grain-drills, Spring-hoe for	E. F. Stoddard	198,320	Dec. 18, 1877	639	194	12	1054
Grain-drying kiln	J. White	186,027	Jan. 2, 1877	218	66	11	46
Grain-elevator	J. L. McLaughlin	186,596	Jan. 23, 1877	798	246	11	141
Grain-elevator	J. A. Woodward	192,611	July 3, 1877	57	16	12	20
Grain-elevator and bag-filler	G. R. Hockenhull	193,248	July 17, 1877	716	219	12	125
Grain-elevators, Discharge-nozzle for	F. J. Kimball	187,536	Feb. 20, 1877	626	194	11	305
Grain-fork	A. Reagan	193,724	July 31, 1877	1224	367	12	213
Grain gatherer and binder	R. Eickemeyer	190,426	May 8, 1877	328	96, 97	11	797
Grain-header reels, Apparatus for raising and lowering.	C. A. Weed	191,497	May 29, 1877	1427	430	11	964
Grain-heater	E. H. Gratiot	197,464	Nov. 27, 1877	785	234	12	900
Grain-huller	C. Schaschne	194,002	Aug. 7, 1877	262	61	12	261
Grain or seed drill	P. H. Cavanaugh	187,455	Feb. 20, 1877	553	171	11	295
Grain-reducing apparatus	C. Bailey	190,180	May 1, 1877	70	19	11	755
Grain-reducing apparatus	J. L. Wilson	192,208	June 19, 1877	714	219	11	1087
Grain-register	C. H. Horton	187,137	Feb. 6, 1877	209	68	11	231
Grain-register	M. W. Nesmith	186,042	Jan. 9, 1877	234	70	11	48
Grain-register	L. Poole	186,614	Jan. 23, 1877	815	252	11	143
Grain-scourer	J. S. Hillyer	191,854	June 12, 1877	338	104	11	1026
Grain scouring and polishing apparatus	M. D. Beardslee	196,860	Nov. 6, 1877	126	38	12	778
Grain-separator	C. P. Ballard, L. H. Pursell, and J. D. Little.	189,545	Apr. 17, 1877	550	171	11	647
Grain-separator	A. A. Balat	189,680	Apr. 17, 1877	684	211	11	664
Grain-separator	J. L. Booth	196,779	Nov. 6, 1877	39	12	12	706
Grain-separator	D. Butger	188,776	Mar. 27, 1877	835	254	11	516
Grain-separator	O. J. Chubbuck	186,230	Jan. 16, 1877	418	128	11	79
Grain-separator	C. R. Clifford	197,251	Nov. 20, 1877	556	164	12	856
Grain-separator	L. V. Davis	190,746	May 15, 1877	673	199	11	849
Grain-separator	T. J. Doyle	186,235	Jan. 16, 1877	423	129	11	80
Grain-separator	W. Edris	188,345	Mar. 13, 1877	385	121	11	438
Grain-separator	A. B. Farquhar	197,024	Nov. 13, 1877	303	90, 91	12	812
Grain-separator	L. Gathmann	195,211	Sept. 18, 1877	485	143	12	484
Grain-separator	T. Harrison and W. C. Buchanan	188,050	Mar. 6, 1877	93	28	11	393
Grain-separator	J. F. Hatfield	192,505	June 26, 1877	1039	312	11	1141
Grain-separator	J. J. Hendrickson	192,260	June 19, 1877	776	235	11	1095
Grain-separator	R. J. Horton	190,327	May 1, 1877	269	62, 63	11	773
Grain-separator	T. J. Hubbell	189,938	Apr. 24, 1877	964	294, 295	11	709
Grain-separator	A. Huntington and J. Hicks	187,634	Feb. 20, 1877	720	223	11	318
Grain-separator	T. Kenny	194,917	Sept. 4, 1877	158	49	12	422
Grain-separator	N. Kibler	189,045	Apr. 3, 1877	32	11	11	563
Grain-separator	J. W. Kline and P. Mason	188,060	Mar. 6, 1877	100	30	11	394
Grain-separator	H. Kurth	188,641	Mar. 20, 1877	680	210, 211	11	488
Grain-separator	W. J. McCulla	192,445	June 26, 1877	980	294, 295	11	1134
Grain-separator	J. L. and I. T. Metcalfe	191,991	June 12, 1877	470	145	11	1043
Grain-separator	R. H. Monteith	197,486	Nov. 27, 1877	805	240	12	903
Grain-separator	E. F. Osborne	189,255	Apr. 3, 1877	223	75	11	588
Grain-separator	J. M. F. Shepler	195,958	Oct. 9, 1877	282	79	12	608
Grain-separator	J. Shilling	191,377	May 29, 1877	1292	391	11	949
Grain-separator	J. E. Smith	192,941	July 10, 1877	403	120	12	76
Grain-separator	R. Sprenkel	194,624	Aug. 28, 1877	863	257	12	373
Grain-separator	H. Standish	195,053	Sept. 11, 1877	310	94	12	450
Grain-separator	J. B. Suitt	197,183	Nov. 13, 1877	471	139	12	836
Grain-separator	S. Todd	195,184	Sept. 11, 1877	445	133	12	471
Grain-separator	G. B. Turner	189,884	Apr. 24, 1877	914	279	11	702
Grain-separator	J. S. Upton	188,210	Mar. 6, 1877	247	77	11	412, 413
Grain-separator	J. D. Van Duson	187,739	Feb. 27, 1877	841	262	11	342
Grain-separator	C. A. Weed	190,990	May 22, 1877	923	273	11	890
Grain-tally	P. Thomas	196,603	Oct. 30, 1877	972	282	12	733
Grain-toller	A. H. Vitt	198,059	Dec. 11, 1877	353	110	12	1006
Grain-ventilator	H. Y. Cahill	190,955	May 22, 1877	885	262	11	885
Grain-winnower	J. W. Johnson	198,623	Dec. 25, 1877	948	289	12	1108
Graining-machine	J. R. Cross	191,318	May 29, 1877	1245	375	11	943
Graining-machine	W. O. Day	194,997	Sept. 11, 1877	251	76	12	442
Graining wood, Compound for	W. A. Wiley	194,913	Sept. 4, 1877	188		12	426
Graining wood, Transfer-sheets for	R. J. Doolan	193,935	Aug. 7, 1877	137		12	253
Grass cutter and rake combined	J. H. Stump	196,265	Oct. 16, 1877	610	175	12	662
Grasses, Machine for exterminating noxious	L. Martin	186,684	Jan. 30, 1877	888	274	11	162
Grasshopper-catch	G. S. Wilson and J. Rode	192,553	June 26, 1877	1088	329	11	1148
Grasshopper-catcher	S. Godard	191,421	May 29, 1877	1331	404	11	954
Grasshopper-catcher	M. H. Simpson	198,420	Dec. 18, 1877	736	223	12	1068
Grasshopper-destroyer	J. V. Barger	191,097	May 22, 1877	1021	305	11	904
Grasshopper-destroyer	L. B. Canfield	187,509	Feb. 20, 1877	605	187	11	302
Grasshopper-killer	C. Hoos	187,855	Feb. 27, 1877	957	297	11	358
Grasshoppers, Machine for catching and destroying	D. H. Hutchins	187,012	Feb. 6, 1877	96	32	11	215
Grasshoppers, Machine for exterminating	T. K. Hansberry	188,359	Mar. 13, 1877	399	125	11	440
Grate	M. G. Bell	189,686	Apr. 17, 1877	690	213	11	665
Grate	J. H. Mearns	191,702	June 5, 1877	180	56	11	1000
Grate	G. B. Mershon	193,018	July 10, 1877	473	143	12	85
Grate	J. A. Moffitt	190,236	May 1, 1877	119	35	11	762
Grate	W. M. Shanks	196,544	Oct. 30, 1877	915	265	12	725

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Grate-back	W. A. Holbrook	193,514	July 24, 1877	936	301	12	171
Grate-bar	A. E. Barthel	190,805	May 15, 1877	719	213	11	856
Grate-bar	A. O. Denio	192,744	July 3, 1877	181	53	12	38
Grate-bar	H. B. Denny	188,867	Mar. 27, 1877	928	282	11	529
Grate-bar	E. M. Erdman	194,344	Aug. 21, 1877	591	177	12	327
Grate-bar	O. J. Hodge	196,015	Oct. 9, 1877	337	96	12	617
Grate-bar	J. R. Kelly	193,093	July 17, 1877	506	170	12	104
Grate-bar	A. Stroh	189,281	Apr. 3, 1877	255	84	11	592
Grate-bar, Hot-blast	H. W. Adams	192,620	July 3, 1877	75	22, 23	12	22
Grate-cleaner	C. E. Murray	193,022	July 10, 1877	476	144	12	86
Grate-fender	E. D. Hawley	194,430	Aug. 21, 1877	672	201	12	337
Grate, Fire-place	R. L. Mitchell	197,157	Nov. 13, 1877	443	130	12	832
Grate-shelf	J. Boorom	190,951	May 22, 1877	882	262	11	885
Grates, Shield and damper for fire-place	E. C. Cooke	194,074	Aug. 14, 1877	293	87	12	281
Grates, Summer front for fire-place	F. S. Bissell	193,413	July 24, 1877	953	290	12	166
Grater, Nutmeg	J. R. Hughes	187,861	Feb. 27, 1877	963	299	11	358
Grater, Nutmeg	J. R. Hughes	198,730	Dec. 25, 1877	1054	321	12	1122
Grater, Nutmeg	J. E. Livingstone	197,383	Nov. 20, 1877	686	206	12	877
Grater, Nutmeg	J. Meyer	189,375	Apr. 10, 1877	368	119	11	615
Grater, Nutmeg	H. Scheibel	186,884	Jan. 30, 1877	1086	336	11	188
Grater, Nutmeg	J. H. H. Wilson	194,942	Sept. 4, 1877	187	57	12	426
Grater, Vegetable	A. W. Dowdell	195,352	Sept. 18, 1877	619	183	12	503
Grating for windows, Folding	C. F. Steckel	193,195	July 17, 1877	651	200	12	117
Grave-tablet	F. C. Bushway	196,740	Nov. 6, 1877	3	1	12	761
Griddle	E. A. Jeffery	197,516	Nov. 27, 1877	839	250	12	907
Griddle	H. C. Milligan	191,703	June 5, 1877	181	56	11	1001
Grinding and polishing surfaces and wheels	F. B. Norton	187,167	Feb. 6, 1877	235	76	11	234
Grinding and triturating apparatus	J. J. Lancaster	188,471	Mar. 20, 1877	527	162	11	466
Grinding-machine	L. Bollmann	192,144	June 19, 1877	648	198, 199	11	1079
Grinding-machine	F. Booker	188,230	Mar. 13, 1877	278	87	11	423
Grinding-machine	J. R. Brown	187,770	Feb. 27, 1877	868	270	11	346
Grinding-machine	G. A. Knowlton	189,235	Apr. 3, 1877	200	68	11	586
Grinding-machine	T. R. Stewart	189,965	Apr. 24, 1877	989	362	11	712
Grinding-machine	C. A. Werden	193,627	July 31, 1877	1129	339	12	200
Grinding-machine	H. Wickham, jr	196,063	Oct. 9, 1877	386	110, 111	12	623
Grinding machine, Butt	L. P. Summers	196,722	Oct. 30, 1877	1086	315, 316	12	749
Grinding machine, Die	J. A. Bidwell	196,183	Oct. 16, 1877	523	152	12	650
Grinding-machine for plate or other rolls, Portable	G. W. Jones	193,255	July 17, 1877	734	221	12	126
Grinding-mill	W. N. Cosgrove	195,349	Sept. 18, 1877	616	182	12	503
Grinding-mill	J. S. Detwiller	188,783	Mar. 27, 1877	844	256	11	517
Grinding-mill	E. Harrison	193,652	July 31, 1877	1163	348	12	204
Grinding-mill	E. Harrison	193,653	July 31, 1877	1165	348, 349	12	204
Grinding-mill	J. Mellinger	189,484	Apr. 10, 1877	472	149, 150	11	628
Grinding-mill	D. C. Newell	196,100	Oct. 16, 1877	438	128	12	639
Grinding-mill	T. D. Powers	188,184	Mar. 6, 1877	220	69	11	409
Grinding-mill	W. Spear	194,540	Aug. 28, 1877	792	235, 236	12	363
Grinding-mill	A. W. Straub	186,449	Jan. 23, 1877	654	201	11	121
Grinding-mill	A. H. Wagner	197,985	Dec. 11, 1877	285	87, 88	12	995
Grinding-mill for soft corn	M. P. Squires	193,784	July 31, 1877	1287	386	12	222
Grinding-mill made of metal	H. B. Stevens	193,785	July 31, 1877	1288	386, 387	12	222
Grinding-mill, Tortilla, &c	J. H. Pendleton	197,889	Dec. 4, 1877	181	55	12	972
Grinding-mills, Adjustable device for	H. F. Westcott and R. O. Randall	190,391	May 1, 1877	281	82	11	783
Grinding-mills, Adjustable device for	L. G. Peel	194,720	Aug. 8, 1877	953	283	12	386
Grindstone, Artificial	A. O. Morgan	192,781	July 3, 1877	223	64	12	42
Grindstone-sharpening attachment	H. F. and M. L. Bush	191,308	May 29, 1877	1238	372	11	942
Grist-mill grain-toller	J. W. Price	191,463	Aug. 21, 1877	707	211	12	342
Ground-squirrel exterminator	H. Dreyer	192,905	July 10, 1877	370	109	12	70
Grubber and stump-extractor	J. Motheral	197,790	Dec. 4, 1877	87	26	12	958
Grubbing-machine	I. Burley	186,228	Jan. 16, 1877	416	128	11	79
Guano-distributer	J. P. Baker	195,327	Sept. 18, 1877	595	175	12	500
Guard: *See* Baggage-check guard. Finger-guard. Insect-guard. Key-hole guard. Knob-screw guard. Mustache-guard. Plow corn-guard. Plow stubble-guard. Roof snow-guard. Sewing-machine dust-guard. Torpedo-guard.							
Guide-board	J. T. Hart	193,405	July 24, 1877	891	272	12	157
Guitars, Tail-piece for	J. Abraham	198,556	Dec. 25, 1877	879	268	12	1097
Gums, Production of water-proof	D. M. Lamb	196,677	Oct. 30, 1877	1042		12	742
Gun and arrow, Blow	L. C. White	186,651	Jan. 23, 1877	848	262	11	148
Gun-barrel	W. H. Baker	198,333	Dec. 18, 1877	650	198	12	1056
Gun-barrels, Machine for boring	H. C. Bull	195,882	Oct. 9, 1877	198	56	12	597
Gun-carriage	T. O'Bryan	187,890	Feb. 27, 1877	991	306	11	362
Gun-carriage	B. B. Hotchkiss	192,830	July 10, 1877	303	88	12	61
Gun-cleaning brush	B. L. Budd	190,123	May 1, 1877	11	4	11	748
Gun-cleaning case	B. L. Budd	190,121	May 1, 1877	9	3	11	748
Gun-cleaning rod	B. L. Budd	190,189	May 1, 1877	78	22	11	756
Gun, Double-barreled	G. H. Fox and H. F. Wheeler	196,749	Nov. 6, 1877	13	4	12	762
Gun field-wiper	B. L. Budd	190,124	May 1, 1877	13	4	11	748
Gun, Machine	J. P. Taylor	190,615	May 8, 1877	550	163, 164	11	826
Gun, Magazine cane	M. Daigle	189,305	Apr. 10, 1877	304	96	11	606
Gun-lock	J. A. Nichols and J. W. Livingston.	198,669	Dec. 25, 1877	992	302	12	1114
Gun-sight	H. Borchardt	197,319	Nov. 20, 1877	623	184	12	866

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Gun, Spring	J. L. Follett	192,751	July 3, 1877	190	55	12	39
Gun, Spring	C. Palatini	191,998	June 12, 1877	478	147	11	1044
Gun, Spring air	P. O'Connor and J. J. Dinnan	190,893	May 15, 1877	802	237	11	867
Gun, Spring air	H. M. Quackenbush	188,028	Mar. 6, 1877	71	20	11	590
Gun, Spring air	M. Weber	198,061	Dec. 11, 1877	355	110	12	1007
Gun-stock, Adjustable	H. Hartley	190,033	Apr. 24, 1877	1065	324	11	721
Guns, Barrel-shifting mechanism for machine	D. C. Farrington	198,366	Dec. 18, 1877	684	208, 209	12	1000
Guns, Cartridge-feeder for machine	D. C. Farrington	198,368	Dec. 18, 1877	686	209	12	1000
Guns, Dart for air	C. Spring and J. T. Robinson	189,070	Apr. 3, 1877	55	20	11	566
Guns, Feeder for machine	J. P. Taylor	189,811	Apr. 17, 1877	814	251	11	680
Guns, Hinge-joint for breech-loading	J. A. Nichols and J. W. Livingston.	198,670	Dec. 25, 1877	993	302	12	1114
Guni, Traverse mechanism for machine	D. C. Farrington	198,367	Dec. 18, 1877	685	209	12	1000
Gutter and molding	H. Strater, jr	190,168	May 1, 1877	61	16	11	754
Gutter-hanger	C. M. Peet	190,359	May 1, 1877	240	71	11	778
Gutter-holder	M. Schmitt	191,616	June 5, 1877	97	30	11	989
Gutters, Machine for making wooden	J. Dole	190,565	May 8, 1877	465	138	11	815
Gutter, Street	C. Bigeon	192,811	July 10, 1877	283	83	12	59
Gymnastic apparatus	P. and F. Medart	187,477	Feb. 20, 1877	574	178	11	298
Gymnastic instrument, Indoor	C. Klemm	193,449	July 24, 1877	933	283	12	163
H.							
Hair-crimper	J. Leeming	193,413	July 24, 1877	900	274	12	158
Hair-crimping pin	A. M. Smith	189,804	Apr. 17, 1877	809	249	11	680
Hair-curling device	R. M. Rose	195,455	Sept. 25, 1877	733	217	12	527
Hair-dressing	N. Helmer	192,508	June 26, 1877	1042	313	11	1142
Hair switch	S. J. Wells	193,304	July 17, 1877	777	238	12	133
Hair switches, Machine for mounting	C. Bourgard	187,590	Feb. 20, 1877	675	210	11	312
Halter	C. Stone	195,777	Oct. 2, 1877	80	21	12	572
Halter-clamp	D. A. Wilson	190,657	May 8, 1877	565	168	11	828
Halter-clip	E. M. Kiune	187,642	Feb. 20, 1877	726	225	11	319
Hame	J. A. Churchill	187,099	Feb. 6, 1877	175	57	11	226
Hame	H. Mason	191,904	June 12, 1877	382	118	11	1032
Hame	M. Turley	193,575	July 24, 1877	1059	317	12	179
Hame and trimming	G. F. Eberhard	186,547	Jan. 23, 1877	751	230	11	134
Hame attachment	J. Hudson	191,591	June 5, 1877	74	22	11	986
Hame-clip	J. Butterfuss	194,125	Aug. 14, 1877	364	108	12	189
Hame-eye	E. G. Latta	196,530	Oct. 30, 1877	904	261	12	723
Hame-fastener	J. R. Basiger and G. W. Feely	197,812	Dec. 4, 1877	106	33	12	961
Hame-fastener	J. C. Moore	187,295	Feb. 13, 1877	376	120	11	266
Hame-fastener	A. A. Phillips	190,513	May 8, 1877	418	122	11	809
Hame-fastener	T. H. Poland	188,072	Mar. 6, 1877	110	33	11	395
Hame-fastener	C. F. Whipple	188,486	Mar. 20, 1877	539	166	11	468
Hame-fastener	A. B. Woodard	193,067	July 10, 1877	523	158	12	91
Hame-fastening	S. A. Woodard	190,661	May 8, 1877	568	169	11	828
Hame, Harness	G. E. Fletcher	190,570	May 8, 1877	470	140	11	816
Hames, Eye for	G. H. Letchworth	187,650	Feb. 20, 1877	737	228	11	320
Hames, Holdback attachment for	J. Robbins	188,955	Mar. 27, 1877	1014	311	11	541
Hame-staple	G. J. Letchworth	194,969	Sept. 11, 1877	222	69	12	439
Hame-terret	B. C. Smith	193,564	July 24, 1877	1050	314	12	178
Hame-tug	W. S. Thayer	192,848	July 10, 1877	320	94	12	64
Hammer, Bush	H. H. Harvey	196,449	Oct. 23, 1877	797	230	12	698
Hammer, Drop	C. D. Wallace	194,747	Aug. 28, 1877	984	292	12	390
Hammer, Tack	F. R. Glascock	194,136	May 22, 1877	1060	317	11	909
Hammers, Die for forging	D. Maydole	186,590	Jan. 23, 1877	794	244	11	140
Hammers, Die for making	H. W. Kip and E. Rieckel	189,232	Apr. 3, 1877	197	67	11	585
Hammers, Manufacture of	D. Maydole	186,588	Jan. 23, 1877	791	243, 244	11	140
Hammers, Riveting	E. Wright	189,411	Apr. 10, 1877	406	128	11	619
Hammock	C. Barnes	197,312	Nov. 20 1877	615	182	12	865
Hammock and cot frame	H. C. and C. Siller and C. H. Dessart.	192,195	June 19, 1877	701	215	11	1086
Hams, Apparatus for smoking	N. G. Simonds	195,730	Oct. 2, 1877	41	12	12	566
Hand-drill	W. Aldrich	195,692	Oct. 2, 1877	1	1	12	561
Hand-rake	T. I. Campbell	197,825	Dec. 4, 1877	118	37	12	963
Hand-rest	J. Ridge	186,625	Jan. 23, 1877	826	255	11	141
Handle: *See* Awl-handle. Brush-handle. Bundle-handle. Coffin-handle. Cup-handle. Hoe-handle. Pump-handle. Saw-handle. Screw-driver handle. Shawl-strap handle. Sheet-metal-vessel handle. Spoon-handle. Tea and coffee pot handle. Tool-handle. Tortoise-shell handle. Traveling-bag handle. Umbrella-handle. Whip and cane handle.							
Handles, Attaching	F. G. and W. F. Niedringhaus	189,378	Apr. 10, 1877	371	120	11	615
Handsaw	W. Hankin	193,704	July 31, 1877	1208	362	12	210
Hanger: *See* Bloom-hanger. Coat-hanger. Door-hanger. Door, gate, &c., hanger. Eave-trough hanger. Garment-hanger. Gate-hanger. Hog-hanger. Picture-hanger. Shaft-hanger. Shafting-hanger. Tobacco-hanger.							
Harness	J. H. Nichols	196,035	Oct. 9, 1877	358	102	12	619
Harness breast-plate	W. Dyer	188,462	Mar. 20, 1877	516	159	11	465
Harness breast-strap	A. G. Ritz	196,935	Nov. 6, 1877	209	61	12	789
Harness-buckle	E. G. Latta	199,632	Aug. 17, 1877	635	197	11	658
Harness check-hook	S. W. Stickney	190,164	May 1, 1877	58	15	11	753

Alphabetical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Harness connection, Vehicle	F. Leclère	189,755	Apr. 17, 1877	765	234	11	674
Harness for breaking horses	C. H. Bowin	196,132	Oct. 16, 1877	476	138	12	644
Harness for horses, Plow	A. B. Coleman	187,965	Mar. 6, 1877	10	3	11	382
Harness holdback-straps, Fastening for	S. D. Lecompte and J. H. Ketcheson.	194,303	Aug. 21, 1877	545	164	12	321
Harness line-fender	T. J. Lindsay	195,029	Sept. 11, 1877	283	86	12	447
Harness-loop	W. Courtenay	195,885	Oct. 9, 1877	203	58	12	598
Harness-maker's stitching-horse	F. Huot	194,241	Aug. 14, 1877	470	142	12	301
Harness-maker's use, Machine for	C. G. Burger and A. D. Shoup	192,359	Jan. 26, 1877	900	270	11	1123
Harness-pad	R. O. Burgess	189,694	Apr. 17, 1877	697	215	11	666
Harness-pad	E. R. Cahoone	188,233	Mar. 13, 1877	284	88	11	424
Harness-pad	M. V. Longsworth	189,365	Apr. 10, 1877	361	116	11	614
Harness, Pad-skirt loop for	J. R. Stone	186,695	Jan. 30, 1877	898	278	11	164
Harness safety-hook and breast-strap	W. J. Metcalf	186,147	Jan. 9, 1877	330	101	11	61
Harness to shafts, Apparatus for attaching	W. C. Smith	191,081	May 22, 1877	1006	299	11	902
Harness-trimming	G. F. Eberhard	187,834	Feb. 27, 1877	935	290	11	355
Harness-trimming	I. N. Just	188,057	Mar. 6, 1877	98	29	11	394
Harness tug attachment	D. H. Brodnax	186,457	Jan. 23, 1877	670	205	11	123
Harness water-hook	R. Lowell	191,353	May 29, 1877	1274	384	11	947
Harrow	D. W. Baird	187,447	Feb. 13, 1877	534	164	11	285
Harrow	A. B. Baker	197,586	Nov. 27, 1877	912	272	12	918
Harrow	F. Barnes	192,407	June 26, 1877	948	284	11	1129
Harrow	E. T. Bousfield	189,181	Apr. 3, 1877	144	51	11	579
Harrow	N. Burnham	188,582	Mar. 20, 1877	626	193, 194	11	480
Harrow	J. W. Carpenter	192,414	June 26, 1877	953	285	11	1130
Harrow	L. B. Coddington and W. W. French.	193,692	July 31, 1877	1199	359	12	209
Harrow	D. Conch	186,805	Jan. 30, 1877	1002	311	11	178
Harrow	A. F. Davis	186,664	Jan. 30, 1877	868	268	11	159
Harrow	W. S. Davis	185,897	Jan. 2, 1877	84	25	11	19
Harrow	F. M. Davison	190,833	May 15, 1877	746	221	11	859
Harrow	J. H. Dolan	188,871	Mar. 27, 1877	932	283	11	530
Harrow	C. Du Perow	198,538	Dec. 25, 1877	865	263	12	1095
Harrow	F. Dyer	193,756	July 31, 1877	1255	377	12	218
Harrow	A. J. B. Foster	186,997	Feb. 6, 1877	82	28	11	213
Harrow	S. J. Franklin	192,249	June 19, 1877	764	232	11	1094
Harrow	J. Garrett	188,510	Mar. 20, 1877	562	173	11	471
Harrow	J. B. Greene	190,210	May 1, 1877	97	28	11	759
Harrow	J. W. Greer	191,956	June 12, 1877	437	135	11	1039
Harrow	W. H. Hatfield	196,090	Oct. 16, 1877	427	124	12	637
Harrow	F. A. Hill	198,512	Dec. 25, 1877	842	256	12	1092
Harrow	T. J. Holmes, sr	190,322	May 1, 1877	205	61	11	773
Harrow	N. S. Johnson	194,353	Aug. 21, 1877	598	179	12	328
Harrow	C. Keehner	187,018	Feb. 6, 1877	100	34	11	216
Harrow	H. I. Lund	191,604	June 5, 1877	87	26	11	988
Harrow	J. E. Marshall	198,401	Dec. 18, 1877	716	218	12	1065
Harrow	D. McIlravey	190,774	May 15, 1877	696	205, 206	11	852
Harrow	G. D. Miles	194,834	Sept. 4, 1877	77	25	12	411
Harrow	R. Mitchell	196,921	Nov. 6, 1877	192	56	12	787
Harrow	W. C. Moore	186,865	Jan. 30, 1877	1070	330	11	186
Harrow	A. Reagan	193,778	July 31, 1877	1217	384	12	220
Harrow	F. S. See and G. G. Simonson	195,661	Sept. 25, 1877	928	277	12	556
Harrow	W. G. P. Sharp	192,942	July 10, 1877	403	121	12	76
Harrow	I. Shupe	187,919	Feb. 27, 1877	1022	315	11	366
Harrow	O. Slagle	193,292	July 17, 1877	764	235	12	131
Harrow	N. Starr	186,064	Jan. 9, 1877	254	77	11	51
Harrow	W. J. St. Clair	197,425	Nov. 20, 1877	729	218	12	883
Harrow	A. O. Stiveson	185,982	Jan. 2, 1877	166	51	11	30
Harrow	C. R. Taylor	192,094	June 19, 1877	598	182	11	1073
Harrow	C. Tolle and C. Wirth	198,710	Dec. 25, 1877	1029	313	12	1119
Harrow	A. J. Upham	192,607	July 3, 1877	52	15	12	19
Harrow	E. Vandawater	194,196	Aug. 14, 1877	428	129	12	298
Harrow	J. J. Vinton	190,102	Apr. 24, 1877	1145	348	11	732
Harrow	J. Weber	192,356	June 26, 1877	897	269	11	1123
Harrow	W. T. Wertman	198,716	Dec. 25, 1877	1034	314	12	1120
Harrow and clod-crusher combined	W. H. Kuhn and S. Miller	188,379	May 13, 1877	425	132	11	443
Harrow and corn-marker	L. Davis	195,991	Oct. 9, 1877	313	88	12	613
Harrow and cultivator	T. Sanders and L. C. Nichaolds	193,999	Aug. 7, 1877	198	60	12	261
Harrow and cultivator combined	H. H. Miller	186,864	Jan. 30, 1877	1069	330	11	186
Harrow and cultivator combined, Sulky	P. F. Fleming	196,523	Oct. 30, 1877	895	258, 259	12	722
Harrow and cultivator, Corn	J. L. Curry	192,742	July 3, 1877	182	53	12	38
Harrow and land-roller combined	W. M. Stehley	186,506	Jan. 23, 1877	709	218	11	129
Harrow and roller	G. R. Hughes and J. E. Wall	194,436	Aug. 21, 1877	479	202	12	338
Harrow, Corn	E. Martin	187,398	Feb. 13, 1877	478	149	11	279
Harrow-coupling	W. Ough, B. L. Loyd, and J. Johnson.	195,839	Oct. 2, 1877	145	41	12	581
Harrow, Cultivating	R. Hamilton	190,031	Apr. 24, 1877	1064	323	11	721
Harrow, ground-marker, and corn-cultivator, Adjustable.	G. E. Cooke	195,486	Sept. 25, 1877	763	225	12	532
Harrow, Revolving	O. P. Fisher	187,370	Feb. 13, 1877	452	142	11	275
Harrow, Revolving	J. W. Smith	195,177	Sept. 11, 1877	439	131	12	470
Harrow, Revolving pulverizing	J. H. Woodgate	195,198	Sept. 11, 1877	458	136	12	473
Harrow, Rotary	C. Y. Hilty	194,432	Aug. 21, 1877	675	201	12	338
Harrow, Rotary	W. T. Nichols	187,769	Feb. 27, 1877	866	270	11	346
Harrow, Rotary	C. Watson	194,749	Aug. 28, 1877	985	292	12	390
Harrow, seed-planter, and roller combined	J. B. Wall	195,677	Sept. 25, 1877	912	281	12	557
Harrow seeding attachment	E. H. Chamberlain	195,796	Oct. 2, 1877	101	30	12	576
Harrow, Smoothing	C. K. Chrispensen	196,969	Nov. 13, 1877	251	75	12	804
Harrow, Sulky	G. M. Furman	191,013	May 22, 1877	973	289	11	897
Harrow, Sulky	J. J. Smith	196,393	Oct. 23, 1877	749	216	12	691
Harrow-teeth blanks, Manufacture of	J. M. Crawford	193,611	July 31, 1877	1148	344	12	202

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Harrow-tooth	M. Hill	197,515	Nov. 27, 1877	838	250	12	907
Harrow-tooth	C. R. Taylor	197,682	Nov. 27, 1877	1003	300	12	931
Harrow-tooth	D. Waterbury and F. Miller	197,703	Nov. 27, 1877	1042	312	12	935
Harrow, Wheel	J. S. Corbin	197,545	Nov. 27, 1877	870	259	12	912
Harrow, Wheel	W. Whipple	187,741	Feb. 27, 1877	843	262	11	342
Harrow, Wheeled	E. J. Lockwood	194,695	Aug. 28, 1877	929	276	12	382
Harvester	J. and J. C. Blair	195,084	Sept. 11, 1877	342	103	12	455
Harvester	A. Campbell	187,809	Feb. 27, 1877	913	283	11	351
Harvester	C. H. Chadbourn	188,002	Mar. 6, 1877	46	12	11	387
Harvester	S. and M. Dyer	196,570	Oct. 30, 1877	943	273	12	728
Harvester	J. H. Elward	193,112	July 17, 1877	584	176	12	107
Harvester	G. Esterly	193,234	July 17, 1877	702	215	12	123
Harvester	A. Gordon, J. H. Myers, G. Telford, and M. G. Hubbard.	187,616	Feb. 20, 1877	701	218	11	315
Harvester	S. Hull	196,458	Oct. 23, 1877	805	232	12	699
Harvester	C. W. Levalley	187,150	Feb. 6, 1877	219	71, 72	11	232
Harvester	C. W. Levalley	192,871	July 10, 1877	339	100	12	66
Harvester	C. W. Levalley	193,122	July 17, 1877	592	179	12	108
Harvester	F. T. Lomont and J. O. Brown	186,858	Jan. 30, 1877	1062	329	11	185
Harvester	L. J. McCormick, W. R. Baker, and L. Eipelding.	193,770	July 31, 1877	1270	381, 382	12	219
Harvester	J. D. Nix	195,038	Sept. 11, 1877	294	89, 90	12	448
Harvester	J. L. Owens	193,614	July 31, 1877	1113	334	12	198
Harvester	W. W. Phillco and A. W. Cox	191,711	June 5, 1877	188	59	11	1002
Harvester	O. N. Skaaraas	189,143	Apr. 3, 1877	112	40, 41	11	574
Harvester	G. H. Spanlding	185,873	Jan. 2, 1877	57	18	11	16
Harvester	S. Spencer	198,055	Dec. 11, 1877	349	108	12	1006
Harvester	J. F. Steward	197,499	Nov. 27, 1877	821	245	12	905
Harvester	E. D. Stewart	187,328	Feb. 13, 1877	414	130	11	270
Harvester	D. Strunk	191,486	May 29, 1877	1405	424	11	963
Harvester	G. and L. Sweet	193,355	July 24, 1877	842	258	12	150
Harvester	W. N. Whitely	197,192	Nov. 13, 1877	480	142, 143	12	837
Harvester	C. M. Young	188,459	Mar. 13, 1877	504	156	11	455
Harvester and thrasher	W. B. Rice and J. C. Hoult	198,522	Dec. 25, 1877	850	259	12	1093
Harvester and thrasher combined	A. J., R. R., and E. J. Wise	188,456	Mar. 13, 1877	501	155, 156	11	454
Harvester, Corn	W. H. and J. L. Cox	189,430	Apr. 10, 1877	424	133	11	621
Harvester, Corn	W. B. Mayfield	193,170	July 17, 1877	632	191	12	114
Harvester, Corn	T. D. McCormick	195,625	Sept. 25, 1877	891	265	12	550
Harvester, Corn	J. H. McNall	194,046	Aug. 14, 1877	265	79	12	277
Harvester, Corn	B. Osgood	191,610	June 5, 1877	91	28	11	989
Harvester, Corn	J. Pleukharp	187,903	Feb. 27, 1877	1003	310	11	363
Harvester, Corn	C. D. Reed	186,497	Jan. 23, 1877	701	215, 216	11	127
Harvester, Corn	R. B. Robbins	186,168	Jan. 9, 1877	349	106, 107	11	63
Harvester, Corn	J. W. Terman	196,400	Oct. 23, 1877	755	218	12	692
Harvester, Corn	A. Wilson	186,653	Jan. 23, 1877	850	263	11	148
Harvester, Cotton	C. E. Graves	193,702	July 31, 1877	1206	361, 362	12	210
Harvester, Cotton	W. J. Powell	196,386	Oct. 23, 1877	744	214	12	690
Harvester, Cotton	F. Van Dorn	194,854	Sept. 4, 1877	97	31	12	414
Harvester, Cotton	J. E. Watkins and M. Sale	194,855	Sept. 4, 1877	99	32	12	414
Harvester-cutter	C. N. Swart	196,952	Nov. 6, 1877	222	66	12	791
Harvester-cutter	A. Walter	191,207	May 22, 1877	1128	337	11	918
Harvester cutting apparatus	H. P. Haskin and J. H. Reigart	191,675	June 5, 1877	156	48	11	997
Harvester draft-equalizer	H. Samson	197,411	Nov. 20, 1877	715	213	12	881
Harvester-dropper	J. T. Jeter	197,138	Nov. 13, 1877	425	125	12	830
Harvester-elevator	F. J. Coddington and H. N. Kennedy.	189,701	Apr. 17, 1877	704	217	11	667
Harvester-elevator	W. F. Olin	195,156	Sept. 11, 1877	416	123	12	466
Harvester finger-bar	H. L. Hopkins	191,678	June 5, 1877	160	49	11	998
Harvester, Grain and grass-seed	J. H. Walton	195,424	Sept. 18, 1877	690	204	12	513
Harvester guard-finger	J. C. Fesler and G. D. Pettingell	187,527	Feb. 20, 1877	620	192	11	304
Harvester hand-binder	F. Peteler	193,994	Aug. 7, 1877	194	59	12	260
Harvester-knife grinder	W. Comey	192,816	July 10, 1877	288	84	12	59
Harvester-rake	H. H. Bridenthal, jr	187,700	Feb. 27, 1877	800	249	11	337
Harvester-rake	O. Cooley	186,413	Jan. 23, 1877	626	191	11	118
Harvester-rake	R. Emerson	191,664	June 5, 1877	145	45	11	995, 996
Harvester-rake	G. H. Goetze	194,670	Aug. 28, 1877	903	270	12	379
Harvester-rake	S. Johnston	193,121	July 17, 1877	591	178	12	108
Harvester-rake	J. H. Myers	187,296	Feb. 13, 1877	377	120	11	266
Harvester-rake	J. H. Myers	190,778	May 15, 1877	699	207	11	853
Harvester-rake	J. Pagin	198,520	Dec. 25, 1877	848	258	12	1093
Harvester rake	E. Smith	187,676	Feb. 20, 1877	757	235	11	322
Harvester-rake	R. D. Warner	191,713	June 5, 1877	216	68	11	1006
Harvester-rake	E. Wilcox	187,675	Feb. 6, 1877	150	50	11	223
Harvester-rake	W. A. Weed	187,575	Feb. 20, 1877	659	205	11	310
Harvester-rake elbow	O. Cooley	195,092	Sept. 11, 1877	351	106	12	456
Harvester-reel	H. A. Adams	191,217	May 29, 1877	1157	317	11	9..1
Harvester-reel	H. A. Adams	191,631	June 5, 1877	112	34, 35	11	991
Harvester-reel	H. A. Adams	191,632	June 5, 1877	113	35	11	991
Harvester-reel	F. J. Coddington and H. H. Kennedy.	187,749	Feb. 27, 1877	818	264, 265	11	343
Harvester-reel	J. J. Dewey	190,013	Apr. 24, 1877	1045	318	11	719
Harvester-reel	H. S. Harris	191,960	June 12, 1877	443	137	11	1040
Harvester-reel	C. W. and W. W. Marsh	187,543	Feb. 20, 1877	632	196, 197	11	306
Harvester-reel	C. W. and W. W. Marsh	189,566	Apr. 17, 1877	572	178	11	650
Harvester-reel	G. W. McCollom	188,021	Mar. 6, 1877	62	18	11	389
Harvester-reel	E. L. Phipps	189,257	Apr. 3, 1877	224	75	11	568

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Harvester-reel	A. Shogren	187,057	Feb. 6, 1877	134	44	11	221
Harvester-reel	C. A. Weed and R. D. Bell	188,704	Mar. 20, 1877	745	229	11	496
Harvester-reel adjustment	C. Denton	194,898	Sept. 4, 1877	140	44	12	420
Harvesters, &c., Lifting-lever for	H. and H. L. Wells	191,087	May 22, 1877	1011	301	11	902
Harvesters, Rocking device for	E. Cheney	192,681	July 3, 1877	136	37	12	30
Harvesters, Self-rake for	I. N. and R. N. Cherry	189,605	Apr. 17, 1877	611	189	11	654
Harvester, Sugar-cane	P. Seitz	196,598	Oct. 30, 1877	968	281	12	732
Harvester track-clearer	H. L. Hopkins	192,998	July 10, 1877	454	137	12	83
Harvester-truck	D. J. Cashman	188,001	Mar. 6, 1877	44	12	11	386
Hasp-lock	H. L. Sholder	192,661	July 3, 1877	116	32	12	28
Hat	A. L. Diamant and C. H. Tobias	197,767	Dec. 4, 1877	63	20	12	955
Hat	D. W. Gitchell	192,065	June 19, 1877	572	173	11	1069
Hat	H. Kuhlman	191,061	May 22, 1877	989	294	11	899
Hat	M. J. Nascimento	191,772	June 12, 1877	253	80	11	1016
Hat	C. E. Richards	188,260	Mar. 13, 1877	301	95	11	427
Hat	C. E. Richards	188,951	Mar. 27, 1877	1008	309	11	541
Hat, Adjustable	L. Y. Cassiano	188,500	Mar. 20, 1877	552	170	11	470
Hat and bonnet stand	E. H. Hart	192,826	July 10, 1877	299	87	12	61
Hat and cap	A. B. Waring	194,490	Aug. 21, 1877	735	218	12	346
Hat and clothes hook, Portable	J. D. Peoples	195,159	Sept. 11, 1877	419	124	12	467
Hat-block spinner	C. Sieber, jr	188,758	Mar. 27, 1877	808	247	11	513
Hat-bodies, Machine for felting	J. S. Taylor	194,566	Aug. 28, 1877	814	242	12	366
Hat-bodies, Machine for washing	T. C. Beatty	186,295	Jan. 16, 1877	473	145	11	87
Hat-body hardening and sizing machine	W. H. Behrens	195,476	Sept. 25, 1877	755	223	12	530
Hat-body, Stiffened or sized	L. Lindfors and C. Schultz	194,606	Aug. 28, 1877	847		12	371
Hat-box	F. Jinkins	198,024	Dec. 11, 1877	321	99	12	1001
Hat-brim-trimming machine	C. M. Osgood	197,167	Nov. 13, 1877	456	134	12	834
Hat-cord fastener	F. E. Phillips	187,669	Feb. 20, 1877	752	233	11	322
Hat-holder	P. H. Miner	186,488	Jan. 23, 1877	695	213	11	127
Hat-holder and seat combined	G. T. Hunsaker	194,437	Aug. 21, 1877	480	203	12	338
Hat-pouncing machine	F. R. and S. R. Going	196,218	Oct. 16, 1877	557	162	12	655
Hat-pouncing machine	E. B. Taylor	187,783	Feb. 27, 1877	885	276	11	348
Hat-pouncing machine	E. B. Whiting and F. E. Daum	196,410	Oct. 23, 1877	762	220	12	693
Hat-pouncing tool	F. R. Going	196,217	Oct. 16, 1877	556	162	12	655
Hat-pressing machine	H. A. Jamieson	196,755	Nov. 6, 1877	19	6	12	763
Hat-pressing machine, Hydraulic	R. Kent	191,533	June 5, 1877	26	8	11	980
Hat-rack	L. F. Gehr	186,825	Jan. 30, 1877	1024	317	11	181
Hat-rack and seat combined	C. Whittaker	186,648	Jan. 23, 1877	846	261	11	147
Hat-shearing machine	D. W. Gitchell	192,066	June 19, 1877	573	173	11	1069
Hat, Straw	J. P. Beatty	197,241	Nov. 20, 1877	547	161	12	855
Hat-sweats, Putting in	C. F. Bosworth	198,338	Dec. 18, 1877	655	199	12	1056
Hats, Die for shaping and finishing	R. L. Goddard	196,575	Oct. 30, 1877	947	274	12	729
Hats, &c., Machine for shearing and napping	W. E. Gowdy	198,377	Dec. 18, 1877	696	212	12	1062
Hats, Wiring and binding	M. A. Cuming and J. Knight	186,312	Jan. 16, 1877	493	151	11	89
Hatchway	G. N. Creamer	188,727	Mar. 27, 1877	776	238	11	509
Hatchway-door, Automatic	R. Heneage	195,276	Sept. 18, 1877	552	161	12	493
Hay and cotton press	A. J. Shuck and B. F. Wildman	198,224	Dec. 18, 1877	542	167	12	1039
Hay and grain unloader	R. Cowden	198,574	Dec. 25, 1877	893	273	12	1100
Hay and straw ricking apparatus	J. R. Hill	186,007	Jan. 9, 1877	199	60	11	44
Hay derrick and stacker	R. N. B. Kirkham	191,598	June 5, 1877	82	25	11	987
Hay, &c., Device for unloading and stacking	G. F. Kelley	188,374	Mar. 13, 1877	420	130	11	443
Hay-elevating device	G. A. Dickson	187,969	Mar. 6, 1877	13	4	11	382
Hay-elevator	W. L. Banks and W. Coning	193,107	July 17, 1877	580	175	12	107
Hay-elevator	E. L. Church	191,568	June 5, 1877	55	17	11	984
Hay-elevator	G. A. Dickson	187,968	Mar. 6, 1877	12	3, 4	11	382
Hay-elevator	G. Hersman	191,282	May 29, 1877	1216	365	11	939
Hay-elevator	C. S. Kershaw	190,337	May 1, 1877	219	65	11	775
Hay-elevator	J. and P. Lux	189,241	Apr. 3, 1877	210	71	11	587
Hay-elevator	J. L. Malcolm	193,415	July 24, 1877	901	275	12	158
Hay-elevator	H. C. Stouffer	190,384	May 1, 1877	267	79	11	781
Hay elevator and carrier	C. Kistner	196,910	Nov. 6, 1877	182	53	12	785
Hay elevator and conveyer	I. S. Krick	195,615	Sept. 25, 1877	882	262	12	549
Hay elevator and conveyer	J. R. Moran	189,053	Apr. 3, 1877	38	13	11	564
Hay for animal-food, Preparing	J. B. Lafitte	194,691	Aug. 28, 1877	926		12	382
Hay-fork, Horse	H. Fisher	186,468	Jan. 23, 1877	678	208	11	124
Hay-fork, Horse	E. V. R. Gardner	198,101	Dec. 11, 1877	393	123	12	1012
Hay-fork, Horse	P. Grant	189,095	Apr. 3, 1877	73	27	11	569
Hay-fork, Horse	B. Jackson	197,137	Nov. 13, 1877	424	125	12	829
Hay-fork, Horse	J. Lux	193,977	Aug. 7, 1877	180	54	12	258
Hay-fork, Horse	J. Orr	186,607	Jan. 23, 1877	808	249	11	142
Hay-loader	R. H. Fawcett	196,441	Oct. 23, 1877	790	228	12	697
Hay-loader	D. F. Roach	187,908	Feb. 27, 1877	1012	312	11	364
Hay-loader	J. W. and E. Small	190,725	May 15, 1877	655	194	11	847
Hay-press	F. B. Boalt	193,073	July 17, 1877	535	162	12	101
Hay-press	P. K. Dederick	187,220	Feb. 13, 1877	302	98, 99	11	255
Hay-press, Portable	G. Ertel	195,592	Sept. 25, 1877	862	256	12	546
Hay-press	W. Kelly	189,744	Apr. 17, 1877	751	230	11	672
Hay-press	I. R. Kulp	198,396	Dec. 18, 1877	713	216	12	1064
Hay press	J. Taylor	185,875	Jan. 2, 1877	60	19	11	16
Hay-rack	J. Porter	194,262	Aug. 14, 1877	490	148	12	307
Hay-rack	C. Williams	192,804	July 3, 1877	250	73	12	46
Hay rake and loader	A. T. Dora	198,281	Dec. 18, 1877	609	184	12	1049
Hay rake and loader	W. Ingledue	193,000	July 10, 1877	455	137	12	83
Hay rake and loader	C. A. O'Dell	195,838	Oct. 2, 1877	144	41	12	581
Hay rake and loader	H. F. Smith	192,298	June 19, 1877	819	219 250	11	1101
Hay-rake, Horse	W. Adriance	190,531	May 8, 1877	432	126	11	811
Hay-rake, Horse	W. Adriance	193,205	July 17, 1877	663	203	12	118
Hay-rake, Horse	W. Adriance	195,783	Oct. 2, 1877	87	26	12	574
Hay-rake, Horse	W. Adriance	198,328	Dec. 18, 1877	645	197	12	1055
Hay-rake, Horse	W. S. Archer	190,462	May 8, 1877	365	106	11	802
Hay-rake, Horse	J. Badger	190,729	May 15, 1877	658	195	11	847
Hay-rake, Horse	W. G. Barnes	195,328	Sept. 18, 1877	597	176	12	500
Hay-rake, Horse	S. D. Bates	198,336	Dec. 18, 1877	652	198	12	1056

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Hay-rake, Horse	J. G. Bishop	194,643	Aug. 28, 1877	879	262	12	376
Hay-rake, Horse	E. T. Bousfield	197,322	Nov. 20, 1877	629	185	12	867
Hay-rake, Horse	C. C. Bradley	190,410	May 8, 1877	314	92	11	795
Hay-rake, Horse	G. E. Burt	186,031	Jan. 2, 1877	221	67	11	46
Hay-rake, Horse	M. P. Denney	189,707	Apr. 17, 1877	709	219	11	667
Hay-rake, Horse	H. R. Hawkins	187,627	Feb. 20, 1877	713	221	11	317
Hay-rake, Horse	H. C. Herchelrode and J. E. Schonacker.	192,332	June 26, 1877	872	263	11	1120
Hay-rake, Horse	J. Hollingsworth	188,907	Mar. 27, 1877	965	294, 295	11	535
Hay-rake, Horse	E. Huber	194,435	Aug. 21, 1877	479	202	12	338
Hay-rake, Horse	C. M. Lufkin and C. G. Allen	187,876	Feb. 27, 1877	975	303	11	360
Hay-rake, Horse	D. Martin	191,161	May 22, 1877	1080	323	11	941
Hay-rake, Horse	B. and E. F. Morse	190,892	May 15, 1877	801	237	11	866
Hay-rake, Horse	B. Owen	186,689	Jan. 30, 1877	892	276	11	162
Hay-rake, Horse	J. V. Parrish	194,719	Aug. 28, 1877	952	282	12	386
Hay-rake, Horse	W. H. Patten	192,081	June 19, 1877	587	178, 179	11	1071
Hay-rake, Horse	S. Ritty	188,677	Mar. 20, 1877	719	221	11	493
Hay-rake, Horse	S. Ritty	193,832	Aug. 7, 1877	34	11	12	239
Hay-rake, Horse	A. W. Stevenson	195,312	Sept. 18, 1877	585	171	12	498
Hay-rake, Horse	E. F. Stoddard	186,025	Jan. 2, 1877	214	65	11	46
Hay-rake, Horse	J. H. Thomas	194,013	Aug. 7, 1877	215	64	12	263
Hay-rake, Horse	J. H. Thomas	194,014	Aug. 7, 1877	216	64	12	263
Hay-rake, Horse	J. H. Thomas	196,501	Oct. 23, 1877	855	246	12	705
Hay-rake, Horse	J. F. Thomas	197,747	Dec. 4, 1877	41	13	12	952
Hay-rake, Horse	J. D. Tracy	194,483	Aug. 21, 1877	728	217	12	345
Hay-rake, Horse	D. W. Travis	190,696	May 15, 1877	621	184	11	842
Hay-rake, Horse	H. C. Velie	190,935	May 15, 1877	845	250	11	872
Hay-rake, Horse	H. C. Velie	193,578	July 24, 1877	1062	318	12	179
Hay-rake, Horse	J. L. Wager	187,070	Feb. 6, 1877	144	48	11	222
Hay-rake, Horse	J. B. Wakeman and J. L. Wager	186,069	Jan. 9, 1877	259	78	11	51
Hay-rake, Horse	J. E. Wisner	192,318	June 19, 1877	842	255	11	1103
Hay-rake, Horse	J. E. Wisner	194,282	Aug. 14, 1877	514	156	12	309
Hay raker and loader	J. S. Hewitt	189,626	Apr. 17, 1877	630	195	11	657
Hay raker, loader, and stacker	P. F. Fleming	194,592	Aug. 28, 1877	836	249	12	369
Hay-stacker	J. Chase	191,001	May 22, 1877	932	275, 276	11	891
Hay-tedder	W. F. Goodwin	197,118	Nov. 13, 1877	407	120	12	827
Hay-tedder and side rake combined	J. Huber and H. Snell	186,346	Jan. 16, 1877	513	164	11	94
Hay-tedder tooth attachment	J. Mudgett	198,410	Dec. 18, 1877	728	220	12	1067
Head-dress	M. E. Thompson	187,198	Feb. 6, 1877	260	85	11	238
Head-light, Locomotive	C. T. Ham	188,130	Mar. 6, 1877	161	50	11	402
Head-light, Locomotive	C. T. Ham	197,932	Dec. 11, 1877	233	71	12	988
Head-light, Locomotive signal	A. Dressell	191,574	June 5, 1877	60	18	11	984
Head-rest	T. Leisure	197,382	Nov. 20, 1877	686	205	12	877
Head-rest	W. L. Miltz	186,487	Jan. 23, 1877	694	213	11	126
Head-rest	I. B. Peckham	195,842	Oct. 2, 1877	146	42	12	582
Health-lift	F. A. Clifford	196,435	Oct. 23, 1877	784	226	12	696
Health-lift	A. W. Lozier	190,149	May 1, 1877	37	11	11	151
Health-lift	A. W. Lozier	190,150	May 1, 1877	39	11	11	151
Health-lift	E. A. Tuttle	197,750	Dec. 4, 1877	45	14	12	952
Heat, Apparatus for collecting, storing, and utilizing	J. S. Hittell and G. W. Deitzler	188,517	Mar. 20, 1877	570	175	11	472
Heat-conducting media	A. Densmore	195,584	Sept. 25, 1877	852		12	545
Heat-regulator	C. G. Schulze	186,959	Feb. 6, 1877	45	16	11	208
Heater: *See* Air-heater; Car-heater; Car and building friction-heater; Desk and seat heater; Feed-water heater; Fire-place heater; Flat-iron heater; Grain-heater; Liquid-heater; Lunch-heater; Molasses-heater; Oil-well heater; Portable heater; Sad-iron heater; Steam air-heater; Tire-heater; Water-heater.							
Heater	E. Chadwick	188,501	Mar. 20, 1877	552	170	11	470
Heater	B. G. Devoe	188,869	Mar. 27, 1877	930	283	11	530
Heater	J. Guardiola	186,725	Jan. 30, 1877	923	286	11	167
Heater	G. L. Thorne and G. C. Farnsworth.	197,748	Dec. 4, 1877	42	14	12	952
Heating and drying apparatus	J. M. Case	195,794	Oct. 2, 1877	99	29	12	575
Heating and lighting apparatus	C. Ritchie	194,373	Aug. 21, 1877	613	184	12	330
Heating and puddling gas-furnace	W. L. McNair	198,653	Dec. 25, 1877	977	297	12	1112
Heating and ventilating buildings	W. F. Flagg	191,952	June 12, 1877	431	133	11	1038
Heating apparatus	W. Bliss	192,559	July 3, 1877	3	1, 2	12	13
Heating apparatus	A. T. Winchell	195,320	Sept. 18, 1877	592	173	12	499
Heating apparatus, Supporting-fixture for	H. B. Smith	193,046	July 10, 1877	503	151	12	89
Heating-furnace	A. Güettermann	197,121	Nov. 13, 1877	410	120, 121	12	827
Heating-furnace	W. S. McKenna	196,534	Oct. 30, 1877	907	262	12	724
Heating-furnace	S. W. Morgan	191,069	May 22, 1877	996	296	11	900
Heating-furnace	C. Stewart	192,092	June 19, 1877	595	181, 182	11	1072
Heating purposes, Apparatus for circulation of fluid for.	T. F. Rowland	192,938	July 10, 1877	399	119	12	75
Heddle-frame	G. Crompton	190,708	May 15, 1877	634	189	11	844
Hedge-trimmer	R. H. Knettle and C. Force	194,249	Aug. 14, 1877	478	144	12	305
Hedge-trimmer	J. A. McMarlin	187,401	Feb. 13, 1877	481	150	11	279
Heel and sole trimming machine	J. H. Buscll	188,337	Mar. 13, 1877	378	118, 119	11	437
Heel-stiffener	W. H. Williams	185,996	Jan. 2, 1877	181	56	11	32
Helmet-light	H. K. Nutze	186,751	Jan. 30, 1877	945	293	11	171
Hen-house	A. H. Kling	197,278	Nov. 20, 1877	581	172	12	860
Hen's nest	H. B. Morrison	191,166	May 22, 1877	1084	325	11	912

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Hen's nest	T. W. Russell	195,655	Sept. 25, 1877	923	275	12	555
Hides and skins, Apparatus for treating	J. Fishback	195,999	Oct. 9, 1877	322	90, 91	12	614
Hides and skins, Fleshing-machine for	T. W. and W. K. Appleyard	192,479	June 26, 1877	1006	303, 304, 305	11	1138
Hides and skins, Machinery for unhairing, scouring, &c.	B. F. Larrabee	193,412	July 24, 1877	897	274	12	158
Hides and skins, Treating	N. Wilson	189,536	Apr. 10, 1877	523		11	635
Hides or skins, Bating compound for	W. McMurtrie	197,739	Dec. 4, 1877	33		12	951
High-pressure engines, Relieving	T. Shaw	190,378	May 1, 1877	257	77	11	780
Hinge	J. Beaudet	193,633	July 31, 1877	1137	340	12	201
Hinge	B. Fahnestock and H. F. Peckham.	196,791	Nov. 6, 1877	52	16	12	768
Hinge	D. H. Jaccard	194,686	Aug. 28, 1877	922	274	12	381
Hinge	J. S. Lash	190,343	May 1, 1877	224	67	11	776
Hinge	D. W. Long	189,866	Apr. 24, 1877	892	273	11	699
Hinge	J. Spruce	188,975	Mar. 27, 1877	1030	317	11	544
Hinge and door for burglar-proof safes	P. F. King	191,680	June 5, 1877	161	49, 50	11	998
Hinge, Awning-blind	C. L. Hasbrouck	197,126	Nov. 13, 1877	415	122	12	828
Hinge, Box, &c	A. F. Gerald	189,211	Apr. 3, 1877	178	61	11	582
Hinge, Butt	C. B. Clark	195,574	Sept. 25, 1877	844	251	12	544
Hinge, Butt	J. K. Clark	197,335	Nov. 20, 1877	641	189	12	869
Hinge, Covering plates for butt	H. T. Blake	196,419	Oct. 23, 1877	768	222	12	694
Hinge, Double-acting	A. A. Stimson and C. T. Sabin	192,305	June 19, 1877	826	251	11	1102
Hinge for awning-blinds	J. J. Groenough	188,793	Mar. 27, 1877	852	259	11	519
Hinge for carriage-doors, &c., Stop	C. W. Butler	189,920	Apr. 24, 1877	947	289	11	706
Hinge for piano-lids	J. D. Peoples	193,032	July 10, 1877	487	147	12	87
Hinge for shutters, &c., Spring	T. Duffy	198,452	Dec. 25, 1877	782	238	12	1084
Hinge for window-blinds, Lock	D. W. Beal	196,181	Oct. 16, 1877	521	151	12	650
Hinge, Gate	G. M. Simpson	187,988	Mar. 6, 1877	33	8	11	385
Hinge, Gate	S. Townsend and J. Vickers	198,167	Dec. 11, 1877	465	145	12	1022
Hinge, Lock	C. J. Ferguson	197,622	Nov. 27, 1877	952	283	12	923
Hinge of enameled iron-ware vessels	F. G. and W. F. Niedringhaus	189,639	Aug. 17, 1877	641	199	11	658
Hinge slate, Reversible	J. Van Kannel and C. F. Rapp	186,443	Jan. 23, 1877	658	201	11	122
Hinge, Spring	J. Brewer	198,533	Dec. 25, 1877	860	262	12	1095
Hinge, Spring	G. Geer	193,157	July 17, 1877	619	188	12	113
Hinge, Spring	J. Harrington	196,355	Oct. 23, 1877	711	205	12	685
Hinge, Spring	J. M. Jones	188,642	Mar. 20, 1877	684	211	11	488
Hinge, Spring	J. Palm	188,402	Mar. 13, 1877	448	139	11	447
Hinge, Spring	A. Schweinfurt	197,801	Dec. 4, 1877	96	29	12	959
Hinge, Spring	J. Spruce	192,091	June 19, 1877	594	181	11	1072
Hinge, Spring	C. S. Van Wagoner	188,319	Mar. 13, 1877	363	114	11	435
Hinge, Strap	C. B. Bristol	186,105	Jan. 9, 1877	292	88	11	56
Hinges, Manufacture of	L. B. Gusman	190,850	May 15, 1877	760	226	11	862
Hitching device	C. H. Bear	198,559	Dec. 25, 1877	882	269	12	1093
Hitching device, Horse	A. B. Wroth	188,717	Mar. 20, 1877	758	232	11	498
Hitching-post	W. N. Hutchinson	189,464	Apr. 10, 1877	456	143	11	625
Hobby-horse	J. A. Peabody	195,727	Oct. 2, 1877	37	11	12	566
Hoe	G. B. Ely	193,645	July 31, 1877	1153	345	12	203
Hoe	O. H. Hicks	189,220	Apr. 3, 1877	185	63	11	583
Hoe	J. R. Hood	187,228	Feb. 13, 1877	309	101	11	256
Hoe	M. Johnson	192,764	July 3, 1877	204	58	12	40
Hoe	J. S. Lester	190,878	May 15, 1877	789	234	11	865
Hoe	A. Schwehr	190,520	May 8, 1877	423	124	11	809
Hoe	J. Walker	197,956	Dec. 11, 1877	257	79	12	991
Hoe and shovel combined	W. R. Russell and C. Steenken	194,375	Aug. 21, 1877	615	185	12	330
Hoe, Combination	D. A. Nelson	197,792	Dec. 4, 1877	88	27	12	958
Hoe-fastening	J. H. Starnes	187,925	Feb. 27, 1877	1028	316	11	366
Hoe, Garden wheel	E. Ruhlmann	194,977	Sept. 11, 1877	229	71	12	439
Hoe-handle	W. R. Littleton	193,165	July 17, 1877	627	190	12	114
Hoes, Die for making grubbing	J. C. Klein	186,681	Jan. 30, 1877	883	273	11	162
Hoes, Machine for the manufacture of	J. C. Smith	194,790	Sept. 4, 1877	37	12	12	405
Hog-catcher	J. H. Eames	191,575	June 5, 1877	62	18	11	985
Hog catching and holding apparatus	I. E. Winchell	193,307	July 17, 1877	779	239	12	133
Hog-cholera compound	R. E. and F. M. Madison	192,590	July 3, 1877	35		12	17
Hog-cholera medicine	G. Preisendanz	195,165	Sept. 11, 1877	426		12	468
Hog-dressing machine	I. Boono	194,404	Aug. 21, 1877	641	193	12	334
Hog-elevator	G. Wheeler	192,723	July 3, 1877	166	48	12	36
Hog hanger and carrier	J. Meyer	192,928	July 10, 1877	389	116	12	74
Hog-pen	P. M. Ketring	186,040	Jan. 9, 1877	232	69	11	48
Hog-scraping machine	R. C. Tompkins	196,269	Oct. 16, 1877	615	177	12	662
Hog-trap	R. B. Corbin	194,652	Aug. 28, 1877	886	264	12	377
Hog-trap	H. Ogborn	186,945	Feb. 6, 1877	31	12, 13	11	206
Hog-trap	C. R. and J. W. Rutledge	192,939	July 10, 1877	401	120	12	75
Hog-trap	T. C. and H. V. Weaver	193,468	July 24, 1877	950	289	12	166
Hog-washing machine	C. Maddux	194,607	Aug. 28, 1877	847	252	12	371
Hoisting and conveying apparatus	F. A. Clarkson	190,742	May 15, 1877	669	198	11	848
Hoisting apparatus	D. Brobston	190,276	May 1, 1877	163	48	11	767
Hoisting apparatus	W. Hawkins	193,333	July 24, 1877	824	252	12	148
Hoisting apparatus	R. O. Peirce	195,640	Sept. 25, 1877	907	270	12	553
Hoisting apparatus	M. Pennypacker	189,648	Apr. 17, 1877	647	201, 202	11	659
Hoisting apparatus	M. Pennypacker	189,649	Apr. 17, 1877	648	202	11	659
Hoisting apparatus, Hydraulic	C. W. Baldwin and W. Burdon	197,310	Nov. 20, 1877	612	181	12	864
Hoisting apparatus or wagon-derrick, Portable	W. W. Carlile	198,506	Dec. 25, 1877	836	254	12	1091
Hoisting apparatus, Safety	J. J. Endres	187,836	Feb. 27, 1877	936	291	11	355
Hoisting apparatus, Tobacco	C. H. Slaton	191,619	June 5, 1877	101	31	11	990
Hoisting-elevators, Belt-shifter for	J. Aeckerle	188,834	Mar. 27, 1877	895	272	11	525
Hoisting-gear for slaughtering cattle	W. H. Axford	191,091	May 22, 1877	1014	302	11	903
Hoisting-jack	W. A. Greenleaf	196,117	Oct. 16, 1877	461	134	12	641
Hoisting-jack	H. Sells	194,055	Aug. 14, 1877	275	82	12	278
Hoisting-machine	H. Batt	192,891	July 10, 1877	358	106	12	69
Hoisting-machine	H. Blackmer, W. Ringer, and D. Van Ostrand.	197,450	Nov. 27, 1877	770	230	12	897

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Hoisting-machine	D. H. Merritt	189,123	Apr. 3, 1877	97	35	11	572
Hoisting-machine	N. P. Otis	193,027	July 10, 1877	481	145	12	86
Hoisting-machine	H. J. Reedy	191,717	June 5, 1877	192	61	11	1003
Hoisting-machine	H. Snowden	187,425	Feb. 13, 1877	505	156	11	282
Hoisting-machine, Hydraulic	F. G. Hesse	191,529	June 5, 1877	19	6	11	979
Hoisting-machine, Windlass	J. and H. Fulmer	186,554	Jan. 23, 1877	757	232	11	135
Hoisting monuments, pillars, &c., Clamp for	T. Maxon	193,982	Aug. 7, 1877	184	55	12	259
Hoisting-tackle	T. A. Weston	194,019	Aug. 7, 1877	222	66	12	264
Holdback	J. W. Hight	191,589	June 5, 1877	73	22	11	986
Holdback-iron	S. E. Winslow	193,839	Aug. 7, 1877	41	13	12	240
Holdback, Safety	C. H. Dow	191,228	May 29, 1877	1166	349	11	932
Holder:							
See Bag-holder.							
See Billiard-holder.							
See Bobbin-holder.							
See Bouquet-holder.							
See Brake-shoe holder.							
See Broom-holder.							
See Card-holder.							
See Cigar-holder.							
See Clasp-holder.							
See Clothes-line holder.							
See Coin-holder.							
See Crayon-holder.							
See Curtain-cord holder.							
See Diamond-holder.							
See Dish-holder.							
See Dust-holder.							
See Egg-holder.							
See Eyeglass-holder.							
See File-holder.							
See Fire-iron holder.							
See Gas-holder.							
See Gas-shade holder.							
See Gutter-holder.							
See Hat-holder.							
See Jar-holder.							
See Label-holder.							
See Lamp-screen holder.							
See Lamp-shade holder.							
See Lath-holder.							
See Lathe-tool holder.							
See Match, stamp, &c., holder.							
See Meat-holder.							
See Mucilage-holder.							
See Napkin-holder.							
See Neck-tie holder.							
See Oil-stone holder.							
See Package-holder.							
See Pen-holder.							
See Pencil-holder.							
See Photography-plate holder.							
See Picture-holder.							
See Pipe and cigar holder.							
See Postage-stamp holder.							
See Rein-holder.							
See Sack-holder.							
See Sad-iron holder.							
See Sash-holder.							
See Screw-cutting-die holder.							
See Shade-holder.							
See Shaft-holder.							
See Shoe-holder.							
See Skate-holder.							
See Spinning-ring holder.							
See Spool-holder.							
See Spooling-machine-bobbin holder.							
See Stock-holder.							
See Syringe-tube holder.							
See Tablet-holder.							
See Tailor's chalk holder.							
See Ticket-holder.							
See Tool-holder.							
See Tooth-pick holder.							
See Trace-holder.							
See Twine-holder.							
See Umbrella-holder.							
See Whip and rein holder.							
Holder for articles while being ground	J. Jowitt	195,930	Oct. 9, 1877	254	71	12	604
Hollow-ware, Machine for grinding and polishing	W. Scully	189,595	Apr. 10, 1877	492	155	11	630
Hominy-mill	G. B. Gaines	190,675	May 15, 1877	600	178	11	840
Hone	J. A. Nober	195,384	Sept. 18, 1877	650	193	12	508
Hone, strop, and oil-cup combined, Pocket	F. A. Ketchum and H. Wilde	189,561	Apr. 17, 1877	568	176	11	649
Honey-box	C. F. Johnson and T. T. Keeler	191,593	June 5, 1877	76	23	11	986
Honey-box	H. N. Tennant	186,900	Jan. 30, 1877	1099	340	11	190
Honey-combs, Foundation for	A. E. McConnell	198,648	Dec. 25, 1877	972	296	12	1111
Hoof-parer	J. Hilger	190,682	May 15, 1877	607	180	11	841
Hook:							
See Balance-spring hook.							
See Hat and clothes hook.							
See Bale-hook.							
See Horse-fork hook.							
See Bench-hook.							
See Lacing-hook.							
See Buckle and snap hook.							
See Mousing-hook.							
See Check-rein hook.							
See Picture-hook.							
See Cultivator safety-hook.							
See Plow-hook.							
See Pruning-hook.							
See Drill-rod grappling-hook.							
See Safety-hook.							
See Snap-hook.							
See Eyelet-hook.							
See Spring-clasp hook.							
See Fish-hook.							
See Wardrobe-hook.							
See Harness-check hook.							
See Whiffletree-hook.							
See Harness water-hook.							
Hook-eyes, Manufacture of	J. Robson	186,437	Jan. 23, 1877	650	198	11	121
Hoop:							
See Barrel-hoop.							
See Cheese-box hoop.							
Hoop-bending machine	E. and B. Holmes	197,972	Dec. 11, 1877	275	84	12	994
Hoop-iron, Machine for splitting and flaring	W. Brown	197,596	Nov. 27, 1877	922	275	12	919
Hoop-machine	J. A. Peoples	194,842	Sept. 4, 1877	84	28	12	412
Hoop-pole-sawing machine	G. Thompson	188,829	Mar. 27, 1877	889	270 271	11	524
Hoop-pole-splitting machine	J. A. Peoples	188,939	Mar. 27, 1877	993	305	11	539
Hoop-pole-splitting machine	J. A. Peoples	192,874	July 10, 1877	343	101	12	66
Hoop-pole-splitting machine	J. A. Peoples	197,052	Nov. 13, 1877	335	99	12	816
Hoop-pole-splitting machine	G. B. Selden	189,659	Apr. 17, 1877	663	205	11	661
Hoop-racking machine	S. Parker	186,365	Jan. 16, 1877	560	170	11	97
Hoop-skirt	A. Benjamin	191,277	May 29, 1877	1211	363	11	938
Hoop-skirt	E. K. Bullock	187,350	Feb. 13, 1877	431	136	11	273
Hoop-skirt former	C. A. Spragne	194,935	Sept. 4, 1877	179	55	12	425
Hoop-skirt spring and machine for same, Braided	A. Benjamin	191,641	June 5, 1877	123	38	11	992
Hoop-stay	B. L. Batting	192,970	July 10, 1877	431	129	12	79
Hoops, Making wooden	L. Reed	188,412	Mar. 13, 1877	455	141	11	448
Hop-drier	C. A. Sands	189,389	Apr. 10, 1877	382	122	11	617
Hop-drier	S. R., J. C., and J. H. Templeton	190,794	May 15, 1877	712	211	11	855
Hop-extract, Composition	J. R. Whiting	190,801	May 15, 1877	717		11	855
Hop-frame	L. G. Wood and C. Maples	188,457	Mar. 13, 1877	563	156	11	454
Hop-picking machine	H. G. Locke	195,140	Sept. 11, 1877	397	119	11	464

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Hop-press	J. Jakel	189,465	Apr. 10, 1877	456	143	11	626
Hop-vine stripper and separator	M. C. Smith	197,744	Dec. 4, 1877	37	12	12	951
Hop-yards, Twine-holder for stringing	G. D. Pierce	193,033	July 10, 1877	488	147	12	87
Hopple	B. F. Melton	194,362	Aug. 21, 1877	605	181	12	329
Horse-blanket	J. C. Ayres	189,172	Apr. 3, 1877	137	49	11	578
Horse-blanket	W. Horisk	195,371	Sept. 18, 1877	635	189	12	506
Horse-blanket attachment	J. C. Ayres	187,342	Feb. 13, 1877	425	133	11	272
Horse-blanket, carriage-robe, &c	L. C. Chase	186,108	Jan. 9, 1877	294	88	11	56
Horse-blankets, Clasp for attaching straps to	A. Z. Neff	187,888	Feb. 27, 1877	988	306	11	362
Horse-checking device, Vehicle	L. Vaughan	185,990	Jan. 2, 1877	174	53, 54	11	31
Horse-detacher	M. Amidon and E. N. McKimm	190,461	May 8, 1877	365	103	11	802
Horse-detacher	G. W. Atkins	195,787	Oct. 2, 1877	92	27	12	574
Horse-detacher	C. O. Baker	194,401	Aug. 21, 1877	638	192	12	333
Horse-detacher	W. A. Clark	190,197	May 1, 1877	84	24	11	157
Horse-detacher	G. A. Hildebrand	191,284	May 29, 1877	1219	366	11	939
Horse-detacher	J. T. Himmeger	196,579	Oct. 30, 1877	950	275	12	730
Horse-detacher	J. L. Kellum	196,361	Oct. 23, 1877	717	206	12	686
Horse-detacher	W. A. Laird	197,642	Nov. 27, 1877	969	288	12	926
Horse-detacher	W. O. Respess and J. L. Lumley	195,534	Sept. 25, 1877	806	239	12	538
Horse-detacher	A. B. Roberts	188,956	Mar. 27, 1877	1015	312	11	541
Horse-detaching apparatus	J. L. Hattery	195,123	Sept. 11, 1877	382	115	12	461
Horse-detaching apparatus	W. Jones	193,764	July 31, 1877	1264	379, 380	12	219
Horse-detaching apparatus	L. F. Sleeper	188,427	Mar. 13, 1877	417	146	11	450
Horse-fork hook	H. Snyder	187,190	Feb. 6, 1877	253	83	11	237
Horse-hitch	P. J. Fischle	194,234	Aug. 14, 1877	465	141	12	303
Horse-hitching device	W. T. and J. B. Burton	197,014	Nov. 13, 1877	294	87	12	810
Horse-hitching device	C. Frank	194,999	Sept. 11, 1877	253	77	12	443
Horse-hitching device	O. S. Hosmer	191,429	May 29, 1877	1342	407	11	956
Horse-power	T. E. Adams	187,501	Feb. 20, 1877	598	185	11	301
Horse-power	T. E. Adams	192,631	July 3, 1877	77	23	12	22
Horse-power	I. D. Albin, sr	195,244	Sept. 18, 1877	523	152	12	489
Horse-power	T. C. Churchman	195,258	Sept. 18, 1877	537	156	12	491
Horse-power	J. H. Elward	187,366	Feb. 13, 1877	449	141	11	275
Horse-power	J. H. Elward	196,887	Nov. 6, 1877	158	46, 47	12	782
Horse-power	J. M. Hill and J. Forsyth	197,367	Nov. 20, 1877	671	200, 201	12	874
Horse-power	W. H. House	188,638	Mar. 20, 1877	678	209	11	487
Horse-power	D. K. Hungerford	191,858	June 12, 1877	342	105	11	1026
Horse-power	E. E. Husby	194,684	Aug. 28, 1877	921	274	12	381
Horse-power	P. Keeley	194,688	Aug. 28, 1877	923	275	12	381
Horse-power	J. and H. Kolling	191,442	May 29, 1877	1358	411	11	957
Horse-power	J. Kramer and B. Boke	193,820	Aug. 7, 1877	24	8	12	237
Horse power	E. R. Lancaster	194,156	Aug. 14, 1877	396	117	12	293
Horse-power	R. Leonard	187,646	Feb. 20, 1877	733	227	11	319
Horse-power	J. E. Muldrow	186,152	Jan. 9, 1877	334	102	11	61
Horse-power	R. C. Rhodes and W. F. Holden	186,878	Jan. 30, 1877	1081	334	11	187
Horse-power	J. S. Shelly	188,821	Mar. 27, 1877	884	268	11	523
Horse-power, Traction	D. T. Gillis	189,354	Apr. 10, 1877	351	113	11	612
Horse-powers, Draft-equalizing device for	J. R. Dickinson	195,264	Sept. 18, 1877	543	158	12	492
Horse-powers, Hook for draw-rods for	M. B. Erskine	186,236	Jan. 16, 1877	424	130	11	80
Horse-powers, Link for endless chain	J. Westinghouse	191,211	May 22, 1877	1132	339	11	919
Horse-powers, Traverse-pinion for	J. A. Field	186,238	Jan. 16, 1877	425	130	11	80
Horse-protector	W. S. Marsh	189,369	Apr. 10, 1877	364	117	11	614
Horse-rake, Revolving	L. Bissell	189,992	Apr. 24, 1877	1012	310	11	715
Horses and cattle, Condition-powder for	J. H. Marshall	196,916	Nov. 6, 1877	189		12	786
Horses and cattle, Condition-powder for	L. Shoenfeld	194,379	Aug. 21, 1877	618		12	331
Horses and cattle, Mask for	A. H. Trueblood	193,055	July 10, 1877	511	153	12	90
Horses, Detaching	N. Dexter	188,602	Mar. 20, 1877	644	199	11	483
Horses, Detaching	L. F. Sleeper	188,426	Mar. 13, 1877	470	146	11	450
Horses' feet, Sponge-holder for	T. T. Furlong	192,821	July 10, 1877	292	85	12	60
Horses from cribbing, Apparatus for preventing	J. E. Snead and R. A. Burns	195,667	Sept. 25, 1877	933	278	12	557
Horses, Hampering device for	W. H. Means	186,597	Jan. 23, 1877	798	246	11	141
Horses, Toe-weight for	P. G. Olds	198,498	Dec. 25, 1877	829	251	12	1090
Horses, Toe-weight for	S. A. Phelps	192,002	June 12, 1877	481	148	11	1045
Horses, Vehicle device for checking	G. L. Kenyon	196,362	Oct. 23, 1877	718	206	12	686
Horseshoe	C. W. Atkinson	189,011	Apr. 3, 1877	4	1	11	559
Horseshoe	J. D. Billings and M. A. Decker	187,699	Feb. 27, 1877	800	248	11	337
Horseshoe	J. C. Brightman	189,692	Apr. 17, 1877	695	214	11	665
Horseshoe	J. R. Cancio	190,740	May 15, 1877	667	198	11	848
Horseshoe	C. H. Chubbuck	195,797	Oct. 2, 1877	102	30	12	576
Horseshoe	J. A. Conkey	193,807	Aug. 7, 1877	11	4	12	236
Horseshoe	D. W. Copeland	196,633	Oct. 30, 1877	999	291	12	737
Horseshoe	H. B. Cornish and C. P. Hunt	186,544	Jan. 23, 1877	747	229	11	134
Horseshoe	F. Erntz	187,608	Feb. 20, 1877	694	216	11	314
Horseshoe	S. P. Fisher	189,718	Apr. 17, 1877	722	222	11	669
Horseshoe	J. B. Going	188,620	Mar. 20, 1877	658	203	11	485
Horseshoe	J. B. Hague	196,446	Oct. 23, 1877	794	229	12	697
Horseshoe	T. Henry	193,953	Aug. 7, 1877	152	47	12	225
Horseshoe	H. L. and G. W. Homan	197,553	Nov. 27, 1877	880	262	12	913
Horseshoe	R. B. Hugunin	193,763	July 31, 1877	1263	379	12	219
Horseshoe	R. B. Hugunin	196,457	Oct. 23, 1877	804	232	12	699
Horseshoe	A. L. Lincoln	198,635	Dec. 25, 1877	958	292	12	1109
Horseshoe	J. J. Mervesp	195,222	Sept. 18, 1877	496	146	12	486
Horseshoe	T. W. Murphy	194,712	Aug. 28, 1877	943	280	12	384
Horseshoe	E. Murraine	192,342	June 26, 1877	882	266	11	1121
Horseshoe	C. H. Perkins	192,127	June 19, 1877	631	192	11	1077
Horseshoe	C. H. Perkins	194,783	Sept. 4, 1877	31	9	12	404
Horseshoe	H. A. Read	196,479	Oct. 23, 1877	832	240	12	702
Horseshoe	J. N. Schuldt	196,541	Oct. 30, 1877	913	265	12	725
Horseshoe	F. Senft and U. Lorch	198,419	Dec. 18, 1877	736	223	12	1068
Horseshoe	G. P. Sheffield	188,967	Mar. 27, 1877	1024	315	11	543
Horseshoe	N. Sifferman	197,418	Nov. 20, 1877	723	215	12	882

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Horseshoe	T. Skelton	195,410	Sept. 18, 1877	675	200	12	512
Horseshoe	W. M. Temple	191,785	June 12, 1877	269	83	11	1018
Horseshoe attachment	G. W. Price	195,047	Sept. 11, 1877	305	92	12	449
Horseshoe-bar	A. Barton	190,806	May 15, 1877	721	213	11	856
Horseshoe-blanks, Machine for rolling	J. D. Billings	194,028	Aug. 14, 1877	249	74	12	275
Horseshoe-blanks, Machine for rolling	J. H. Snyder	194,934	Sept. 4, 1877	178	55	12	425
Horseshoe-calk fastener	M. Colton	197,829	Dec. 4, 1877	124	38	12	963
Horseshoe-calk sharpener	R. Denholm	188,868	Mar. 27, 1877	929	282	11	529
Horseshoe-clips, Machine for forming	J. Miller	197,651	Nov. 27, 1877	978	291	12	927
Horseshoe-machine	J. W. Chewniog, jr	188,102	Mar. 6, 1877	133	40	11	398
Horseshoe-machine	A. J. Roberts	195,232	Sept. 18, 1877	506	149	12	487
Horseshoe-machine	W. Roberts	189,322	Apr. 10, 1877	323	102, 103	11	608
Horseshoe-machine	J. T. Walker	197,698	Nov. 27, 1877	1033	310	12	934
Horseshoe-making machine	J. D. Billings	198,448	Dec. 25, 1877	778	236	12	1083
Horseshoe-making machine	A. J. Roberts	197,566	Nov. 27, 1877	890	265	12	914
Horseshoe-nail	A. W. Kingsland	191,242	May 29, 1877	1179	353	11	934
Horseshoe-nail	L. Weaver	187,685	Feb. 20, 1877	764	237	11	324
Horseshoe-nail blanks, Machine for cutting	J. Ferguson	194,767	Sept. 4, 1877	9	3	12	402
Horseshoe-nail blanks, Machine for feeding	J. E. Wheeler and F. W. Coy	192,665	July 3, 1877	119	33	12	28
Horseshoe-nail-finishing machine	B. Bevelander	188,770	Mar. 27, 1877	818	250	11	515
Horseshoe-nail-finishing machine	P. Dunn and T. Harris	188,239	Mar. 13, 1877	286	90	11	425
Horseshoe-nail-finishing machine	R. Hersey	196,227	Oct. 16, 1877	567	164, 165	12	656
Horseshoe-nail-finishing machine	S. S. Mortimer and J. R. Robinson	189,769	Apr. 17, 1877	776	238	11	675
Horseshoe-nail-finishing machine	S. S. Putnam	196,932	Nov. 6, 1877	205	59, 60	12	788
Horseshoe-nail-finishing machine	C. W. Woodford	189,589	Apr. 17, 1877	597	184	11	653
Horseshoe-nail-forging machine	J. Roy	195,653	Sept. 25, 1877	920	274	12	555
Horseshoe-nail machine	R. M. Cummings	192,236	June 19, 1877	745	227, 228	11	1092
Horseshoe-nail machine	W. Keys	196,585	Oct. 30, 1877	956	277	12	731
Horseshoe-nail machine	H. E. Woodford	194,393	Aug. 21, 1877	629	189, 190	12	332
Horseshoe-nail-making machine	R. E. Cady	187,808	Feb. 27, 1877	911	282, 283	11	351
Horseshoe-nail-making machine	R. M. Cummings	190,011	Apr. 24, 1877	1042	317, 318	11	718
Horseshoe-nail-making machine	J. M. Laughlin	189,108	Apr. 3, 1877	84	30, 31	11	570
Horseshoe-nail-making machine	J. M. Laughlin	189,112	Apr. 3, 1877	89	32	11	571
Horseshoe-nail-making machine	D. I. Pruner	194,464	Aug. 21, 1877	708	211, 212	12	343
Horseshoe-nail-making machine	J. E. Wheeler, D. B. Loring, and F. W. Coy.	192,666	July 3, 1877	121	33	12	28
Horseshoe-nail plate	J. Ferguson	194,768	Sept. 4, 1877	10	3	12	402
Horseshoe-nail plates, Machine for beveling	J. M. Laughlin	189,111	Apr. 3, 1877	88	31	11	571
Horseshoe-nail-pointing machine	J. Ferguson	194,769	Sept. 4, 1877	10	4	12	402
Horseshoe-nails, Manufacture of	G. L. Hall	189,031	Apr. 3, 1877	21	7	11	561
Horseshoe-nails, Manufacture of	D. B. Loring	193,975	Aug. 7, 1877	177	54	12	258
Horseshoe-nails, Manufacture of	I. C. Tate	189,586	Apr. 17, 1877	594	183	11	652
Horseshoe-nails, Manufacturing	H. P. Fowler	186,720	Jan. 30, 1877	919	285	11	167
Horseshoe-nails, Shears for cutting	J. A. Huggett	198,543	Dec. 25, 1877	868	264	12	1096
Horseshoe-swage	J. Smith	188,824	Mar. 27, 1877	886	269	11	524
Horseshoe-toe weight	S. T. Bano	187,582	Feb. 20, 1877	667	207	11	311
Horseshoe, Weighted	E. E. Seixas	186,277	Jan. 16, 1877	458	141	11	85
Horseshoes, Manufacture of	C. H. Perkins	187,727	Feb. 27, 1877	828	258	11	341
Horseshoes to prevent interfering, Rubber attachment for.	M. McBarron	188,808	Mar. 27, 1877	872	265	11	521
Hose and pipe coupling	W. H. Jolliffe and T. C. Schneider	196,807	Nov. 6, 1877	70	21	12	770
Hose and pipe coupling	W. Loughridge	187,023	Feb. 6, 1877	103	35	11	216
Hose and pipe nozzle	E. R. Tomlinson	191,199	May 22, 1877	1117	334	11	917
Hose and tubing, Manufacture of India-rubber	J. Murphy	188,303	Mar. 13, 1877	344		11	432
Hose-bridge	J. Taylor	189,072	Apr. 3, 1877	56	21	11	567
Hose-carriage	I. W. McGaffey	190,231	May 1, 1877	115	34	11	761
Hose-coupling	W. H. Burden and B. J. Pleasance	194,575	Aug. 28, 1877	822	245	12	367
Hose-coupling	N. S. Curtis	185,896	Jan. 2, 1877	84	25	11	19
Hose-coupling	T. W. Eccleston	193,810	Aug. 7, 1877	13	5	12	236
Hose-coupling	J. Galvin	188,886	Mar. 27, 1877	945	288	11	532
Hose-coupling	S. Ingersoll	196,904	Nov. 6, 1877	174	51	12	784
Hose-coupling	W. B. Kilbourne	189,941	Apr. 24, 1877	966	295	11	709
Hose-coupling	E. A. Leland	187,395	Feb. 13, 1877	476	148	11	278
Hose-coupling	C. F. Littlejohn	193,166	July 17, 1877	628	190	12	114
Hose-coupling	M. M. Manville and C. A. Bissell	198,643	Dec. 25, 1877	966	295	12	1110
Hose-coupling	W. W. Marsden	198,402	Dec. 18, 1877	717	218	12	1065
Hose-coupling	A. J. Morse	195,150	Sept. 11, 1877	410	122	12	465
Hose-coupling	A. E. Rich	189,059	Apr. 3, 1877	46	16	11	565
Hose-coupling	W. A. Rideout	189,905	Apr. 24, 1877	934	284	11	704
Hose-coupling	F. Stewart	195,543	Sept. 25, 1877	814	241	12	539
Hose coupling, Fire-engine	G. Sterling	195,311	Sept. 18, 1877	585	171	12	498
Hose-couplings, Clamp or device for attaching	D. T. Ellis	191,039	May 22, 1877	970	288	11	896
Hose-couplings, Strap for securing	J. A. Caldwell	197,716	Dec. 4, 1877	7	3	12	947
Hose-couplings, Tool for tightening and fastening straps for securing.	J. A. Caldwell	191,026	May 22, 1877	958	284	11	894
Hose-jacket	A. Work	192,209	June 19, 1877	715	219	11	1088
Hose-leak stopper	J. F. Logan	194,697	Aug. 28, 1877	931	277	12	382
Hose, Machinery for manufacturing water-tight	R. Cowan	189,610	Apr. 17, 1877	615	191	11	655
Hose, Mandrel used in the manufacture of rubber	J. Murphy	198,497	Dec. 25, 1877	828	251	12	1090
Hose, Manufacture of riveted water-proof	J. Murphy	186,492	Jan. 23, 1877	697	211	11	127
Hose-nozzle	J. Clifford and J. Gielow	191,934	June 12, 1877	412	128	11	1036
Hose-nozzle	M. S. Curtis	186,310	Jan. 16, 1877	491	150	11	89
Hose-nozzle	J. Gielow	187,123	Feb. 6, 1877	196	64	11	229
Hose-nozzle	J. Gilchrist and A. Anderson	196,216	Oct. 16, 1877	555	161	12	655
Hose-nozzle	C. A. Howard	188,909	Mar. 27, 1877	967	295	11	535
Hose-nozzle	H. Hunt	187,635	Feb. 20, 1877	721	224	11	318
Hose-nozzle	J. H. Johnson	198,515	Dec. 25, 1877	844	257	12	1092

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Hose-nozzle	A. Koegler and C. H. Nicoll	193,522	July 24, 1877	1006	303	12	172
Hose-nozzle	L. Poh and C. Shoop	195,643	Sept. 25, 1877	910	271	12	553
Hose-nozzle	J. H. Stump	189,328	Apr. 10, 1877	331	105	11	609
Hose-nozzle and sprinkler, Combined	P. H. Ryon	192,880	July 10, 1877	349	105	12	67
Hose nozzle or pipe	C. T. Holloway	191,964	June 12, 1877	446	138	11	1040
Hose-reel	B. B. Douglas	195,265	Sept. 18, 1877	515	158	12	492
Hose reel and carriage	C. L. Fitch	195,922	Oct. 9, 1877	239	68	12	603
Hose-reel, Automatic	H. C. DeWitt	190,014	Apr. 24, 1877	1045	319	11	719
Hose-reel, Automatic	W Neracher	191,461	May 29, 1877	1377	416	11	960
Hose-reel, Automatic	C. W. Tremain	192,543	June 26, 1877	1077	325	11	1147
Hose, Repairing rubber-lined	C. Callahan	197,245	Nov. 20, 1877	552	163	12	586
Hose, Rubber	H. J. Merrens	194,363	Aug. 21, 1877	605	181	12	329
Hose-straps, Implement for fastening	J. A. Caldwell	197,717	Dec. 4, 1877	8	3	12	947
Hose to couplings, Strap or device for securing	S. Adlam, jr.	190,728	May 15, 1877	657	195	11	847
Hose to hose-couplings, Attaching	E. A. Leland	186,855	Jan. 30, 1877	1060	328	11	185
Hose, Tool for inserting rings in	S. H. Loring	187,875	Feb. 27, 1877	974	302	11	360
Hose, Water-proof	D. C. Gately	186,123	Jan. 9, 1877	308	94	11	58
Hosiery-goods, Machine for crocheting the tops of	J. M. Merrow	195,520	Sept. 25, 1877	795	235, 236	12	536
Hot-air and other baths, Apparatus for giving	T. Keech	189,231	Apr. 3, 1877	196	66, 67	11	585
Hot-air and vapor bath combined, Portable	G. Gordon	196,890	Nov. 6, 1877	160	47	12	782
Hot-air apparatus	C. Pottier	191,779	June 12, 1877	261	82	11	1017
Hot-air engine	J. Hock and L. P. Martin	190,490	May 8, 1877	394	115	11	806
Hot-air engine, High-pressure	O. Stenberg	186,377	Jan. 16, 1877	578	177	11	99
Hot-air furnace	G. T. Flint	193,238	July 17, 1877	707	216, 217	12	124
Hot-air furnace	W. E. Henderson	188,902	Mar. 27, 1877	958	293	11	534
Hot-air furnace	W. E. Henderson	197,128	Nov. 13, 1877	416	123	12	828
Hot-air furnace	C. Marchand	192,835	July 10, 1877	307	90	12	62
Hot-air furnace	W. McFarland	190,773	May 15, 1877	695	205	11	852
Hot-air furnace	J. F. Pease	192,837	July 10, 1877	310	90	12	62
Hot-air furnace	A. J. Robinson	193,553	July 24, 1877	1038	311	12	176
Hot-air furnace	J. C. Sanborn	186,217	Jan. 16, 1877	408	125	11	78
Hot-air furnace	W. J. Towne	188,318	Mar. 13, 1877	361	113	11	435
Hot-air furnace	E. Varney	188,211	Mar. 6, 1877	248	78	11	413
Hot-air furnaces, Joint for	J. B. Pierce	195,044	Sept. 11, 1877	302	91	12	449
Hot-air or vapor bath, Portable	G. H. Ellis	195,753	Oct. 2, 1877	61	18, 19	12	570
Hot air register	J. W. Collins	186,081	Jan. 9, 1877	269	81	11	53
Hot-air register	L. E. Smith	191,080	May 22, 1877	1005	299	11	901
Hot-air register attachment	P. Mihan	186,051	Jan. 9, 1877	242	73	11	49
Hot-air register evaporator	W. R. Lafourcade	195,617	Sept. 25, 1877	881	263	12	549
Hot-air register evaporator	I. W. Parmenter	188,535	Mar. 20, 1877	583	180	11	474
Hot-air reservoir	G. W. Bollman	186,103	Jan. 9, 1877	289	87	11	55
Hot-water apparatus	E. Lawler	189,314	Apr. 10, 1877	315	99	11	607
Hot-water heating apparatus	S. and J. Bennett	189,687	Apr. 17, 1877	691	213	11	665
Hot-water heating apparatus	E. W. Kempiu	186,850	Jan. 30, 1877	1055	325	11	184
Hound, Rear	A. Muhleisen	193,127	July 17, 1877	596	180	12	109
House: *See* Frame house. Hen-house. Ice-house. Smoke-house. Wooden house.							
House-boilers, Pressure safety attachment for	G. Steele	193,049	July 10, 1877	506	152	12	89
Household press	W. Y. A. Boardman	191,918	June 12, 1877	395	123	11	1034
Household press	H. W. Clum	193,144	July 17, 1877	609	184	12	111
Hub and box, Vehicle	G. W. Eldridge	189,439	Apr. 10, 1877	432	136	11	622
Hub and box, Vehicle	J. J. C. Frazer	192,250	June 19, 1877	765	233	11	1094
Hub-attaching device	J. Lathrop and F. H. Allen	190,052	Apr. 24, 1877	1091	332	11	724
Hub attaching device, Vehicle	C. C. Egerton	194,342	Aug. 21, 1877	589	176	12	336
Hub-borer	E. Caswell	194,290	Aug. 21, 1877	533	161	12	319
Hub-boring machine	J. C. Corneil	198,081	Dec. 11, 1877	373	117	12	1009
Hub-boring machine	R. G. Rowe and I. B. Edington	193,618	July 31, 1877	1121	336	12	199
Hub-cap and axle-nut	A. R. Cushman	189,433	Apr. 10, 1877	429	134	11	622
Hub, Clamping	G. H. Clemens	198,188	Dec. 18, 1877	505	156	12	1034
Hub cap, Vehicle	E. G. Edgely	189,437	Apr. 10, 1877	431	136	11	622
Hub, Elastic	G. W. Hayes	189,357	Apr. 10, 1877	354	114	11	612
Hub, Elastic	J. B. Sammis and G. W. Hayes	189,388	Apr. 10, 1877	380	122	11	617
Hub, Metallic	C. E. Owen	189,489	Apr. 10, 1877	478	151	11	628
Hub-runner	G. T. Kimball	189,362	Apr. 10, 1877	359	115	11	613
Hub, Vehicle	M. C. Boffington	191,926	June 12, 1877	402	125	11	1035
Hub, Vehicle	S. G. Mason	195,145	Sept. 11, 1877	402	121	12	464
Hub, Vehicle	C. J. Valentine	192,799	July 3, 1877	245	71	12	45
Hub, Vehicle	J. M. Whitiog	195,862	Oct. 2, 1877	172	48	12	585
Hub, Vehicle-wheel	C. Kundegraber	188,380	Mar. 13, 1877	425	132	11	444
Hubs, Sand-band for vehicle	E. P. Brown	195,746	Oct. 2, 1877	56	17	12	569
Hubs to axles, Device for attaching	F. H. Allen and J. Lathrop	195,245	Sept. 18, 1877	525	152	12	489
Huller: *See* Coffee-huller. Clover-huller. Grain-huller. Rice-huller.							
Hydrant	H. Flint	194,814	Sept. 4, 1877	59	19	12	408
Hydrant	W. T. Garratt	192,062	June 19, 1877	569	172	11	1069
Hydrant	E. Hand	194,087	Aug. 14, 1877	308	91	12	283
Hydrant	W. Kaiser	192,336	June 26, 1877	877	264	11	1120
Hydrant	S. W. Lewis	188,384	Mar. 13, 1877	428	134	11	444
Hydrant	S. W. Lewis	192,379	June 26, 1877	919	276	11	1126
Hydrant	J. Porteous	196,384	Oct. 23, 1877	742	214	12	689
Hydrant	J. Richardson	188,676	Mar. 20, 1877	718	220	11	493
Hydrant	J. K. Rugg	189,790	Apr. 17, 1877	798	245	11	678
Hydrant and hose plug	G. W. Lutz	195,937	Oct. 9, 1877	261	73	12	605
Hydrant and plug valve	T. Phillips	194,973	Sept. 11, 1877	225	70	12	439
Hydrant, Fire	J. Flower	196,000	Oct. 9, 1877	323	91	12	614
Hydraulic elevator	C. W. Baldwin and W. Burdon	197,311	Nov. 20, 1877	614	181, 182	12	865
Hydraulic elevator	G. Ball	193,392	July 24, 1877	878	269	12	155
Hydraulic elevator	E. Brewer	189,424	Apr. 10, 1877	419	131	11	621

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Hydraulic elevator	K. Fletcher	192,116	June 19, 1877	619	188, 189	11	1075
Hydraulic elevator	E. H. Hunt	187,710	Feb. 27, 1877	812	252	11	339
Hydraulic elevator	E. H. Hunt	187,711	Feb. 27, 1877	813	252, 253	11	339
Hydraulic elevator, Double	H. Davies	193,929	Aug. 7, 1877	126	40	12	252
Hydraulic elevators, Valve for	T. Meikle	186,863	Jan. 30, 1877	1068	330	11	186
Hydraulic engine	W. H. Clark	190,005	Apr. 24, 1877	1035	316	11	718
Hydraulic engine	J. Coates	192,154	June 19, 1877	662	202	11	1080
Hydraulic engine	G. H. Everson	197,926	Dec. 11, 1877	228	69, 70	12	987
Hydraulic engine	S. Marsden	195,033	Sept. 11, 1877	287	87	12	447
Hydraulic engine	C. D. Page	189,380	Apr. 10, 1877	372	120	11	616
Hydraulic engine	J. D. Richardson	187,048	Feb. 6, 1877	127	42	11	220
Hydraulic engine	A. J. Stott	188,203	Mar. 6, 1877	242	76	11	412
Hydraulic engine	W. O. Wakefield	195,314	Sept. 18, 1877	587	172	12	498
Hydraulic engine, Rotary	J. Talley, jr	196,266	Oct. 16, 1877	610	175	12	662
Hydraulic jack	D. L. Weaver and G. Noble	192,472	June 26, 1877	1001	302	11	1137
Hydraulic jack and press	F. G. Hunter	198,620	Dec. 25, 1877	941	288	12	1107
Hydraulic motor	J. M. Bois	186,195	Jan. 16, 1877	389	119	11	75
Hydraulic motor	J. M. Bois	190,700	May 15, 1877	624	186	11	843
Hydraulic motor for driving light machinery	W. J. Lane	186,683	Jan. 30, 1877	885	274	11	162
Hydraulic-power regulator	W. Sellers	186,172	Jan. 9, 1877	354	108	11	64
Hydraulic press	F. S. Kinney	189,630	Apr. 17, 1877	633	196	11	657
Hydraulic press	F. S. Kinney	196,233	Oct. 16, 1877	576	166	12	657
Hydraulic rotary motor	A. Heimer	197,631	Nov. 27, 1877	960	285	12	925
Hydrocarbon-burner	W. L. Imlay	191,969	June 12, 1877	451	140	11	1041
Hydrocarbon fluids, Apparatus for testing the igniting temperature of.	F. B. Squier	197,197	Nov. 13, 1877	486	144	12	838
Hydrocarbon from substances which have been treated therewith, Extracting.	W. Adamson	191,633	June 5, 1877	114	35	11	991
Hydrocarbon-furnace	B. Hershey	189,217	Apr. 3, 1877	182	62	11	583
Hydrogen, Composition for producing sulphureted.	C. R. Stuntz	197,574	Nov. 27, 1877	897		12	915
I.							
Ice and refrigerating machine	T. Cook	192,233	June 19, 1877	742	226	11	1091
Ice and refrigerating machine	T. Cook	192,234	June 19, 1877	743	226, 227	11	1091
Ice, Apparatus for covering the surface of roads with.	F. Byron	198,569	Dec. 25, 1877	890	271	12	1099
Ice-ax	W. H. Coleman	189,339	Apr. 10, 1877	337	108	11	610
Ice-boat, Steam	J. and J. Arnao, jr	189,910	Apr 24, 1877	937	286	11	705
Ice-box attachment for settling and cooling ale and beer.	J. J. Moloney and I. S. Schuyler	189,948	Apr. 24, 1877	971	297	11	710
Ice-conveyer	A. Hunt	190,144	May 1, 1877	33	10	11	151
Ice-cream freezer	O. Dexter, jr	192,684	July 3, 1877	137	38	12	31
Ice-cream freezer	E. Frank and J. Kissling	187,612	Feb. 20, 1877	698	217	11	315
Ice-cream freezer	J. F. Rote	186,438	Jan. 23, 1877	650	199	11	121
Ice-cream freezer	J. Solter	191,725	June 5, 1877	200	63	11	1004
Ice-cream freezer	W. E. Wise	187,442	Nov. 20, 1877	750	224	12	886
Ice-cream receiver	J. D. Taber	186,899	Jan. 30, 1877	1098	340	11	190
Ice-creeper	H. Antes	193,104	July 17, 1877	578	174	12	106
Ice-creeper	C. Bartlett and E. C. Lewis	187,347	Feb. 13, 1877	429	135	11	272
Ice-creeper	J. Crossley	189,703	Apr. 17, 1877	706	217	11	667
Ice-creeper	C. P. Dewey and R. P. Scott	192,057	June 19, 1877	564	171	11	1068
Ice-creeper	C. A. Kryter	191,863	June 12, 1877	346	107	11	1027
Ice-creeper	F. Leuthy	194,452	July 24, 1877	936	284	12	163
Ice-creeper	J. J. Lewis	198,492	Dec. 25, 1877	823	249	12	1089
Ice-creeper	A. T. Moore	189,949	Apr. 24, 1877	972	297	11	710
Ice-creeper	J. D. Porter	187,234	Feb. 13, 1877	317	102	11	257
Ice-cutter	M. H. Winebrener	192,609	July 3, 1877	54	15	12	19
Ice-cutting machine	C. Chadwick	191,515	June 5, 1877	5	2	11	977
Ice-cutting machine	C. C. Springer	197,746	Dec. 4, 1877	39	13	12	952
Ice-elevator	H. P. Crowell	195,095	Sept. 11, 1877	354	107	12	457
Ice-elevator	L. Zistel	186,781	Jan. 30, 1877	975	303	11	175
Ice, Grappling-instrument for handling cans in making.	E. Burgin	193,479	July 24, 1877	958	291	12	167
Ice-house	E. Schandein	191,719	June 5, 1877	194	61	11	1093
Ice-house, Portable	J. E. Lippitt	194,097	Aug. 14, 1877	316	93	12	284
Ice in ice-houses, Preserving	T. Krausch	186,581	Jan. 23, 1877	784	242	11	130
Ice-loading station	E. D. Gird	187,125	Feb. 6, 1877	197	65	11	229
Ice-machine	A. T. Ballantine	191,638	June 5, 1877	119	37	11	992
Ice-machine	E. Fixary	192,497	June 26, 1877	1029	310	11	1140
Ice-machine	D. L. Holden	190,036	Apr. 24, 1877	1068	325	11	722
Ice-machine	R. H. Lucas	186,589	Jan. 23, 1877	792	244	11	140
Ice-machine	T. L. Rankin	188,945	Mar. 27, 1877	1000	307	11	540
Ice-machine	R. Schultz	193,286	July 17, 1877	758	232, 233	12	130
Ice-machine	S. Tragheim	189,525	Apr. 10, 1877	508	161	11	633
Ice-machines, Lubrication of	F. V. De Coppet	190,423	May 8, 1877	325	95	11	797
Ice-making apparatus	E. Krost	197,223	Nov. 20, 1877	528	156	12	852
Ice-making, &c., Machinery for the artificial production of cold for.	P. Gifford	193,648	July 31, 1877	1155	346	12	203
Ice, Manufacture of	C. L. Riker	191,256	May 29, 1877	1191	358	11	995
Ice-plow	J. F. Behm	191,020	May 22, 1877	953	283	11	891
Ice-plow	C. A. and T. L. Hiles	190,216	May 1, 1877	102	29	11	759
Ice-plows, Clearing-tooth for	N. P. Nelson	193,828	Aug. 7, 1877	31	10	12	238
Ice-runs, Adjustable switch for	H. F. Dernell	196,141	Oct. 16, 1877	486	141	12	645
Ice-slide	W. Guthrie	197,356	Nov. 20, 1877	661	196	12	873
Ice-surfaces, Producing evenly-congealed	J. Gamgee	196,653	Oct. 30, 1877	1023	297	12	749
Ice-tongs	P. Euler	187,609	Feb. 20, 1877	695	216	11	314
Ice-tool	J. Crawford	189,196	Apr. 3, 1877	162	56	11	581
Ice, Treating water to produce clear	T. B. E. Turrettini	196,316	Oct. 23, 1877	675		12	680

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Illuminating apparatus	H. A. Clum	198,276	Dec. 18, 1877	605	183	12	1018
Illuminating device for Christmas-trees, &c	B. Egloff	194,421	Aug. 21, 1877	661	199	12	336
Implement, Compound	W. H. Sprague	198,524	Dec. 25, 1877	852	259	12	1093
Incrustation, Composition for removing	H. H. Kreamer	190,770	May 15, 1877	694		11	852
Incubator	T. M. Davis	193,490	July 24, 1877	970	294, 295	12	168
Incubator	W. Masterton	186,145	Jan. 9, 1877	328	100	11	60
Incubator	E. S. Renwick	193,616	July 31, 1877	1115	335, 336	12	198
Incubator	C. C. Weston	189,820	Apr. 17, 1877	822	254	11	681
Index	C. H. Denison	197,345	Nov. 20, 1877	652	192, 193	12	871
Index, Book	A. J. Snider and D. C. Wolf	186,633	Jan. 23, 1877	832	257	11	145
Index-cutting machine	W. McMillan	196,987	Nov. 13, 1877	269	79	12	806
Index, Revolving	J. Ettinger	187,526	Feb. 20, 1877	619	192	11	304
Indexer	J. Suter	186,382	Jan. 16, 1877	583	178	11	99
Indexing	D. A. Roberts	191,885	June 12, 1877	365	112	11	1029
Indicating the force of blows, Machine for	H. J. Blakeslee	196,110	Oct. 16, 1877	452	132	12	610
Indicator: *See* Bellows-indicator. Book line-indicator. Elevator-indicator. Mining-shaft indicator. Office-indicator. Piano or organ indicator. Railway-speed indicator. Spectacle-indicator. Speed-indicator. Speed and current indicator. Speed and distance indicator. Station-indicator. Steamboat-engine indicator. Steering apparatus indicator. Washing-list indicator.							
Indicator	C. C. Curtiss and J. Curtis	187,823	Feb. 27, 1877	926	287	11	353
Indicator	G. W. Daniels	190,474	May 8, 1877	380	110	11	803, 804
Indicator	S. Wheeler	188,451	Mar. 13, 1877	496	154	11	454
Indicator and low-water alarm	W. Starkey	186,961	Feb. 6, 1877	47	16, 17	11	208
Indicator for time, railways, and other purposes	T. E. Barrow	198,483	Dec. 25, 1877	813	247	12	1088
Infusions, Apparatus for making	R. U. Etzensberger	190,964	May 22, 1877	894	265	11	887
Ingot, Bessemer-steel	J. Reese	190,448	May 8, 1877	351		11	800
Ingot-mold	J. Baker	193,591	July 31, 1877	1093	327	12	195
Ingot-mold wash	W. R. Jones	191,974	June 12, 1877	455		11	1041
Ingot or slab, Soft center	J. Park, jr	192,346	June 26, 1877	887		11	1121
Ingots of steel, Casting	C. Shunk	188,822	Mar. 27, 1877	885	269	11	523
Ingots while casting, Compressing	W. R. Jones	186,576	Jan. 23, 1877	776	240	11	138
Inhaler	W. Boekel	196,185	Oct. 16, 1877	825	152	12	651
Inhaler	J. B. De Guise	192,488	June 26, 1877	1018	308	11	1139
Inhaler	J. Lewis	196,812	Nov. 6, 1877	75	23	12	771
Inhaler and respirator	I. S. Emery	196,206	Oct. 16, 1877	546	158	12	653
Injector	W. A. Ashcraft	192,213	June 19, 1877	718	220	11	1008
Injector	J. Fergus	189,715	Apr. 17, 1877	718	221	11	668
Injector	W. H. Newell	191,773	June 12, 1877	254	80	11	1016
Injector	J. Proeger	189,259	Apr. 3, 1877	226	76	11	589
Injector	W. Randall	186,619	Jan. 23, 1877	820	254	11	144
Injector, Hydrocarbon	H. E. Parson	191,546	June 5, 1877	37	11	11	981
Injector, Steam-boiler	J. Westley	188,707	Mar. 20, 1877	748	230	11	496
Ink, Canceling	C. C. Egerton	198,090	Dec. 11, 1877	384		12	1011
Ink, Canceling	W. F. Van Der Linden and H. C. King.	188,212	Mar. 6, 1877	249		11	413
Ink for canceling stamps	J. E. Hover	194,966	Sept. 11, 1877	220		12	438
Ink, Plate oil or varnish for printing	C. Collins	192,709	July 3, 1877	179		12	37
Ink, Writing	N. T. Tilman	194,015	Aug. 7, 1877	217		12	263
Inking apparatus	J. G. Kurtz	191,864	June 12, 1877	347	107	11	1027
Inking-roller socket	D. Weckerlin	187,071	Feb. 6, 1877	145	48	11	222
Inkstand	H. H. Burrington	190,192	May 1, 1877	81	22	11	157
Inkstand	E. C. Quin	185,963	Jan. 2, 1877	152	46	11	28
Inkstand	E. W. Stiles	195,462	Sept. 25, 1877	740	218	12	528
Inkstand	W. J. Thorn	192,849	July 10, 1877	321	94	12	64
Inkstands, Filling and emptying	I. M. Fisher	189,209	Apr. 3, 1877	174	60	11	582
Inlaid work, Machine for making	E. Jebsen	196,906	Nov. 6, 1877	176	51	12	784
Inlaid work, Block for designing	J. U. Mueller	191,167	May 22, 1877	1085	325	11	912
Insect-destroyer	G. B. Drum	187,258	Feb. 13, 1877	341	108	11	260
Insect-destroyer	C. H. Emerson	190,858	May 15, 1877	750	222	11	860
Insect-destroyer	E. H. Fordtran	196,211	Oct. 16, 1877	551	160	12	654
Insect-destroyer	F. J. McDonald	193,417	July 24, 1877	903	275	12	158
Insect-destroyer	J. C. Melcher	191,360	May 29, 1877	1279	386	11	947
Insect-destroying apparatus	J. R. Duke	193,643	July 31, 1877	1149	344	12	202
Insect-destroying composition	E. Bagnicki and A. Groeschel	188,766	Mar. 27, 1877	814		11	514
Insect-destroying composition	J. M. Madding	196,124	Oct. 16, 1877	469		12	642
Insect-destroying composition	J. B. Margarit	186,260	Jan. 16, 1877	444		11	83
Insect-destroying device	C. W. Niver	195,155	Sept. 11, 1877	415	123	12	466
Insect-destroying machine	K. C. Atwood	193,105	July 17, 1877	579	174	12	106
Insect-destroying powders, Distributor for	A. M. Elsworth	198,361	Dec. 18, 1877	677	207	12	1059
Insect-guard	J. Young	193,745	July 31, 1877	1241	373	12	216
Insect-powder blower	W. F. Brummer	191,797	June 12, 1877	278	87	11	1019
Insect-trap	B. Sylvester	188,760	Mar. 27, 1877	809	248	11	514
Insects, Machine for applying powder for the destruction of.	P. Kitchell	187,717	Feb. 27, 1877	819	255	11	340
Inspirator	J. T. Hancock	185,861	Jan. 2, 1877	45	14	11	14
Insulated wire	H. Redding	189,262	Apr. 3, 1877	230	77	11	589
Insulator, Telegraph	P. Seiler	187,183	Feb. 6, 1877	247	84	11	236
Invalid-chair	J. E. Pitcher	197,491	Nov. 27, 1877	812	242	12	903
Invalid-chair	E. C. Smith and G. B. Reily	194,477	Aug. 21, 1877	722	215	12	344

Alphabctical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Iron:							
See Band or hoop iron. Box-iron. Carriage-slat iron. Carriage-top iron. Curling-iron. Flat-iron. Fluting-iron. Fluting and polishing iron. Fluting and smoothing iron. Holdback-iron. Hoop-iron. Plaiting-iron. Sad-iron. Shoemaker's pounding-iron. Smoothing-iron. Soldering-iron. Waffle-iron. Wagon-body iron. Whiffletree-iron.							
Iron and steel cementation compound, Preparing	J. W. Hoxie	191,681	June 5, 1877	162	50	11	998
Iron and steel, Compound and process for refining	J. E. Sherman	188,078	Mar. 6, 1877	114		11	396
Iron and steel from cold short pig, Producing wrought	C. C. McCartey	191,698	June 5, 1877	177		11	1000
Iron and steel, Furnace and process for manufacturing	B. Bayliss	186,975	Feb. 6, 1877	59	20	11	209
Iron and steel, Manufacture of	J. Reese	193,551	July 24, 1877	1034		12	176
Iron and steel, Manufacturing	M. A. Sutherland	196,547	Oct. 30, 1877	921		12	726
Iron and steel, Refining	S. R. Smyth and J. Simpson	192,948	July 10, 1877	409	123	12	77
Iron, Apparatus for tempering and converting	C. Dion	192,839	June 19, 1877	747	229	11	1092
Iron-cutting machine	J. L. and E. W. Backus	188,089	Mar. 6, 1877	123	37	11	397
Iron, Dividing cold-rolled	J. S. Atkinson	193,842	Aug. 7, 1877	43	14	12	240
Iron into cast-steel, Converting cast	C. W. Siemens	189,273	Apr. 3, 1877	240	80, 81	11	590
Iron, Introducing purifying agents into	C. W. Hall	194,674	Aug. 28, 1877	908		12	380
Iron, Manufacture of	W. H. St. John	190,926	May 15, 1877	835	247	11	871
Iron or steel direct from the ore, Obtaining wrought	C. M. Dupuy	194,340	Aug. 21, 1877	585	175	12	326
Iron ores, Separating sludge from	W. Hooper	190,325	May 1, 1877	208	62	11	773
Iron, Process and compound for refining	J. E. Sherman	188,076	Mar. 6, 1877	113		11	396
Iron, Process and compound for refining	J. E. Sherman	188,077	Mar. 6, 1877	113		11	396
Iron scrap into bars, Converting	A. J. Moxham	193,540	July 24, 1877	1023	308	12	175
Iron table-stand	G. R. Osborn and B. A. Drayton	187,300	Feb. 13, 1877	383	121	11	206
Iron ware, Enameling	E. C. Quinby and J. C. Whiting	193,422	July 24, 1877	908		12	159
Iron-winding machine	A. J. Moxham	192,653	July 3, 1877	102	30	12	26
Ironing apparatus	E. Humphrey	194,683	Aug. 28, 1877	919	273	12	381
Ironing apparatus	H. Monk	192,929	July 10, 1877	390	116	12	74
Ironing apparatus	P. O'Thayne	190,444	May 8, 1877	346	101	11	800
Ironing apparatus	P. O'Thayne	190,445	May 8, 1877	347	101, 102	11	800
Ironing apparatus	F. M. Sanderson	194,267	Aug. 14, 1877	495	150	12	307
Ironing apparatus	H. E. Smith	188,686	Mar. 20, 1877	727	223	11	494
Ironing-board	T. Ellison	192,687	July 3, 1877	140	39	12	31
Ironing-board	R. W. Hargrave	189,623	Apr. 17, 1877	628	194	11	656
Ironing-board	J. Howell	197,371	Nov. 20, 1877	676	209	12	875
Ironing-board	W. M. Kepler	193,765	July 31, 1877	1266	380	12	219
Ironing-board	I. Wolfe	195,197	Sept. 11, 1877	457	136	12	472
Ironing-board	F. H. Young and J. S. Sheldon	194,209	Aug. 14, 1877	437	133	12	300
Ironing board, Shirt	J. W. Cadwell	197,454	Nov. 27, 1877	775	231	12	898
Ironing-machine	J. W. Abel	197,078	Nov. 13, 1877	365	107	12	820
Ironing-machine	H. Monk	197,047	Nov. 13, 1877	330	97	12	815
Ironing-machine	P. O'Thayne	197,884	Dec. 4, 1877	176	53	12	971
Ironing-table	A. Aitken	198,262	Dec. 18, 1877	594	179	12	1046
Ironing-table	C. W. Barber and G. Lenox	195,252	Sept. 18, 1877	531	155	12	420
Ironing-table	E. H. Caylor	187,254	Feb. 13, 1877	337	107	11	260
Ironing-table	G. Chelini	192,230	June 19, 1877	739	225	11	1091
Ironing-table	D. Choate	189,843	Apr. 24, 1877	871	266	11	696
Ironing-table	E. E. Gore	186,038	Jan. 9, 1877	230	68	11	47
Ironing-table	G. W. Hook	189,222	Apr. 3, 1877	188	64	11	584
Ironing-table	E. C. Hotchkiss and C. W. Hebard	190,140	May 1, 1877	26	7	11	750
Ironing-table	H. C. Hotchkiss	195,283	Sept. 18, 1877	559	163	12	494
Ironing-table	T. Libby	189,239	Apr. 3, 1877	205	69	11	586
Ironing-table	H. Littlefield	192,772	July 3, 1877	213	62	12	41
Ironing-table	J. R. McBrayer	197,877	Dec. 4, 1877	170	51	12	970
Ironing-table	R. S. McEntire	188,161	Mar. 6, 1877	193	59	11	406
Ironing-table	E. B. Smith	189,663	Apr. 17, 1877	667	206	11	662
Ironing-table	O. A. White	188,086	Mar. 6, 1877	120	36	11	397
Ironing-table, Folding	G. Mason	195,685	Sept. 25, 1877	903	269	12	552
J.							
Jack:							
See Boot-jack. Booting-jack. Carriage-jack. Hoisting-jack. Hydraulic jack. Lasting-jack. Lifting-jack. Pegging-jack. Pressure-jack. Shoemaker's jack. Vehicle-jack. Wagon-jack. Window-jack.							
Jacket	C. B. Moulton	187,405	Feb. 13, 1877	484	151	11	280
Jacquard machinery	W. P. Jennings	193,874	Aug. 7, 1877	70	23	12	244
Jail and prison bar	T. T. Tolan	192,471	June 26, 1877	1001	301	11	1137
Jail-cell	P. J. Pauly	197,887	Dec. 4, 1877	179	54	12	971
Japanning wood	A. Gigrich	197,029	Nov. 13, 1877	311		12	813
Jar:							
See Butter and fruit jar. Drill-jars. Fruit-jar. Glass jar. Stone-ware jar.							
Jar-cover	E. Meier	191,541	June 5, 1877	34	10	11	981
Jar-cover, Hermetically-closing	T. A. Weber	190,940	May 15, 1877	853	252	11	873
Jar-holder	T. and H. Halo	192,760	July 3, 1877	201	57	12	40
Jelly-glass	W. C. King	187,714	Feb. 27, 1877	817	254	11	340
Jewelry, Manufacture of cabinet	W. A. L. Miller	198,207	Dec. 18, 1877	524	162	12	1057
Jewelry, Manufacture of plated	A. M. English and W. W. Covell	191,665	June 5, 1877	147	45	11	9 6
Jewelry, Metallic tassel for	W. A. Sturdy	196,314	Oct. 23, 1877	673	194	12	6 0
Jewelry, Ornamenting metallic surface for	E. Huguenin	192,167	June 19, 1877	672	206	11	1082
Jewelry pin and hook	R. S. Shanks	197,230	Nov. 20, 1877	535	158	12	853
Jewels, Tool for opening	A. Schwerter	188,757	Mar. 27, 1877	807	247	11	513

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
				Spec.	Dr'g.	Vol.	Page.
Jib-sheet traveler	J. D. Drinker	187,831	Feb. 27, 1877	933	289	11	354
Jib-sheet traveler	H. S. Lawson	190,226	May 1, 1877	111	32	11	761
Jib-sheet-traveler clutch	R. T. Osgood	188,256	Mar. 13, 1877	298	94	11	426
Jig, Trough	W. Hooper	190,324	May 1, 1877	207	62	11	773
Joiner's clamp	W. H. Lilly	194,830	Sept. 4, 1877	74	24	12	411
Joint: *See* Bridge-joint. Carriage-top joint. Pipe-joint. Rail-joint. Railway-joint. Railway-rail joint. Sucker-rod joint. Tenon and mortise joint. Universal joint.							
Journal	W. C. Shipherd	192,023	June 12, 1877	504	154	11	1047
Journal, Anti friction	J. H. Bell	194,641	Aug. 28, 1877	877	262	12	375
Journal-bearing	J. N. Kaufholz	197,143	Nov. 13, 1877	431	127	12	830
Journal-box	B. F. Sturtevant	189,881	Apr. 24, 1877	911	278	11	701
Journal-box	G. W. Sweeney	191,489	May 29, 1877	1409	425	11	963
Journal box and bearing	J. S. Atkinson	192,405	June 26, 1877	946	283	11	1129
Journal-box, Anti-friction	E. C. Davey	198,101	Dec. 11, 1877	302	93	12	998
Journal-box, Anti-friction	A. L., G. M., and O. E. Peters	197,289	Nov. 20, 1877	592	175	12	862
Journal-boxes, Device for lining	D. A. Hopkins	193,818	Aug. 7, 1877	23	8	12	237
Journal, Compensating	G. D. Kempton	198,626	Dec. 25, 1877	951	290	12	1108
Journal, Compensating	P. Rieseck	186,167	Jan. 9, 1877	348	106	11	63
Journal-lubricator	J. H. Burnett	190,665	May 15, 1877	594	176	11	839
Jug, &c	T. C. Hargrave	186,557	Jan. 23, 1877	760	233	11	136
Juice-evaporator, Open-pan	D. Watson	186,646	Jan. 23, 1877	844	261	11	147
K.							
Kaolin, Artificial	A. D'Estampes	187,971	Mar. 6, 1877	16		11	383
Keg-cover fastener	J. H. Jones and C. Walker	188,373	Mar. 13, 1877	419	130	11	443
Keg for white lead, paints, &c	R. B. Turnbull	195,733	Oct. 2, 1877	44	13	12	567
Kettle-cover	A. J. and L. L. Beaudette	194,571	Aug. 28, 1877	820	244	12	367
Kettle-furnace	J. F. Prath	191,465	May 29, 1877	1382	417	11	960
Kettle, Preserving	J. I. Burr	193,804	Aug. 7, 1877	9	3	12	236
Kettle, Steam cooking	W. G. Flanders	197,113	Nov. 13, 1877	492	118	12	826
Kettle, Steam cooking	W. G. Flanders	198,095	Dec. 11, 1877	389	122	12	1011
Key: *See* Gas-key. Lock-key. Piano-forte key. Watch-key.							
Key	W. H. Taylor	197,684	Nov. 27, 1877	1004	300	12	931
Key-boards, Machine for smoothing ivory	M. Pratt	195,902	Oct. 9, 1877	221	63	12	600
Key-fastener	L. W. Kennedy	190,146	May 1, 1877	35	10	11	151
Key-fastener	J. M. Munn	187,165	Feb. 6, 1877	233	76	11	234
Key-fastener	T. C. Upson	185,989	Jan. 2, 1877	173	53	11	31
Key-guide for locks	L. Hillebrand	190,035	Apr. 24, 1877	1067	324	11	722
Key-hole cover	G. W. Amborn	194,635	Aug. 28, 1877	871	260	12	375
Key-hole escutcheon	J. Spruce	188,974	Mar. 27, 1877	1030	317	11	544
Key-hole guard	C. Eisele	191,123	May 22, 1877	1045	313	11	907
Key-hole guard for locks	E. W. Moffatt	188,302	Mar. 13, 1877	344	108	11	432
Key-ring	J. S. Birch	196,418	Oct. 23, 1877	767	222	12	694
Keys, Machine for making machinery	A. Shogren	186,439	Jan. 23, 1877	651	199, 200	11	121
Keys, Machine for milling, pointing, and shouldering	H. G. Hotchkiss	193,252	July 17, 1877	720	220	12	125
Keys, Stock for the manufacture of	W. H. Taylor	189,520	Apr. 10, 1877	505	160	11	633
Kiln: *See* Bone-black kiln. Brick-kiln. Grain-drying kiln. Lime-kiln. Malt-kiln. Stoneware-kiln.							
King-bolt, Carriage	J. H. Combs	190,555	May 8, 1877	456	135	11	814
Kitchen-boiler	E. H. Frazier	193,860	Aug. 7, 1877	57	18	12	242
Kitchen-cabinet	G. P. Ziegler	196,736	Oct. 30, 1877	1102	320, 321	12	751
Kitchen-table	L. M. Bowdoin	195,566	Sept. 25, 1877	836	248	12	543
Kitchen utensil	J. Hamilton	186,929	Feb. 6, 1877	9	3	11	204
Kitchen-ventilator	J. A. Leeper	189,114	Apr. 3, 1877	90	33	11	571
Kits and buckets, Machine for making	J. P. and S. N. Blood	191,099	May 22, 1877	1023	306	11	904
Kneading-machine	O. Boland	197,540	Nov. 27, 1877	867	258	12	911
Knee-protector	M. C. Hiester	194,871	Sept. 4, 1877	113	35	12	416
Knife: *See* Army or hunting knife. Corn-knife. Currier's knife. Draw-knife. Drawing-knife. Harvester-knife. Pocket-knife.							
Knife and butter-extractor	J. N. Parker	196,164	Oct. 16, 1877	503	147	12	648
Knife and fork cleaner	A. E. Van Horn	189,974	Apr. 24, 1877	999	305	11	713
Knife and fork polisher	P. M. Ogg	187,981	Mar. 6, 1877	25	7	11	384
Knife and fork scourer	P. A. Hofmann	195,009	Sept. 11, 1877	261	80	12	444
Knife-cleaner	J. T. Cronin	198,278	Dec. 18, 1877	607	183	12	1049
Knife-scourer	C. V. Hadley	192,865	July 10, 1877	334	98	12	65
Knife-scourer	P. Hauersperger	189,214	Apr. 3, 1877	179	61	11	583
Knife-scouring pan	D. H. Cassel and G. W. Zint	189,081	Apr. 3, 1877	63	23	11	567
Knife, Sliding-blade sheath	W. T. Whitehouse	195,319	Sept. 18, 1877	590	173	12	499
Knitting-machine	W. H. Abel	187,696	Feb. 27, 1877	793	247, 248	11	337
Knitting-machine	J. L. Branson	190,952	May 22, 1877	883	262	11	885
Knitting-machine	C. H. Landenberger	188,644	Mar. 20, 1877	686	212	11	488
Knitting-machine	J. Sibson	191,186	May 22, 1877	1104	330	11	915
Knitting-machine	J. M. Slack	190,694	May 15, 1877	618	184	11	842
Knitting-machine	E. Tiffany	188,441	Mar. 13, 1877	484	150, 151	11	452
Knitting-machine needle	L. E. Salisbury	189,500	Apr. 10, 1877	487	154	11	630
Knitting-machine needle	L. E. Salisbury	189,501	Apr. 10, 1877	488	154	11	630
Knitting-machine needle	L. E. Salisbury	189,502	Apr. 10, 1877	489	155	11	630
Knitting-machine needle	O. F. Tripp	187,993	Mar. 6, 1877	38	10	11	385

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
				Spec.	Dr'g.	Vol.	Page.
Knitting-machine, Over-gaiter, &c	H. P. Ballou	197,079	Nov. 13, 1877	366	107 108	12	820
Knitting-machine take-up	J. S. Crane	195,917	Oct. 9, 1877	234	67	12	602
Knitting-machine take-up	G. Jackson	195,929	Oct. 9, 1877	252	71	12	604
Knitting-machines for re-enforcing the knee-caps of stockings, Attachment to.	J. J. Fitz Patrick	193,646	July 31, 1877	1153	345	12	203
Knitting-machines, Yarn-guide and needle-barb presser for.	W. Aiken	197,237	Nov. 20, 1877	543	160	12	854
Knitting or sewing needle	S. Peberdy	191,709	June 5, 1877	186	58	11	1002
Knob, Door, &c	S. Hiler	196,014	Oct. 9, 1877	336	95	12	616
Knob-fastener	O. Mayo	192,443	June 26, 1877	978	294	11	1134
Knob fastening, Door	J. A. Thomson	197,185	Nov. 13, 1877	473	139	12	836
Knob, Hollow metal	C. S. Lewis	192,586	July 3, 1877	31	10	12	17
Knob, Metal	A. B. Hendryx	190,855	May 15, 1877	766	228	11	862
Knob, Metal-covered	R. McManus and R. R. Colburn	190,349	May 1, 1877	230	68	11	776
Knob-roses to doors, Attaching	W. A. Barlow	186,194	Jan. 16, 1877	388	118	11	75
Knob-screw guard, Door	C. M. Baker	196,858	Nov. 6, 1877	124	37	12	778
Knob, Vitrified	S. Hiler	197,468	Nov. 27, 1877	788	235	12	900
Knobs, Attaching shanks to door	A. E. Young	196,852	Nov. 6, 1877	117	35	12	777
Knobs and roses to doors, Attaching	J. H. La Ban	197,381	Nov. 20, 1877	684	205	12	876
Knobs to doors, Attaching	N. A. Ransom	186,018	Jan. 9, 1877	210	63	11	45
Knobs to metal sockets, Attaching glass	J. W. Haines	192,759	July 3, 1877	200	57	12	40
Knobs to metal sockets, Attaching glass	J. W. Haines	196,447	Oct. 23, 1877	795	229	12	697
Knobs to spindles, Attaching	W. D. May	189,244	Apr. 3, 1877	213	72	11	587
Knobs to spindles, Attaching	J. Naylor	191,363	May 29, 1877	1281	387	11	948
Knobs to spindles, Attaching	W. Regan	188,946	Mar. 27, 1877	1062	307	11	540
Knobs to spindles, Attaching	W. Sutherland	190,261	May 1, 1877	145	42	11	765
Knobs to spindles, Attaching door	A. B. Shaw	194,056	Aug. 14, 1877	276	82	12	279
Knobs to their shanks, Attaching	W. A. Barlow	189,012	Apr. 3, 1877	4	2	11	559
L.							
Label and fastener, Tobacco-plug	C. C. jr., and C. R. Mengel	186,745	Jan. 30, 1877	941	292	11	170
Label-gumming machine	L. Morgenthau	196,161	Oct. 16, 1877	500	146	12	647
Label-holder	J. B. Gathright	187,372	Feb. 13, 1877	454	143	11	276
Label-holder	W. H. Somers	195,178	Sept. 11, 1877	410	131	12	470
Label-holder	J. E. Sweetland	191,555	June 5, 1877	46	13	11	982
Labels, Attaching	C. L. Pond	190,446	May 8, 1877	349	102	11	800
Labels, Glossing	C. C. Machrair	196,467	Oct. 23, 1877	817	235	12	700
Labels, show cards, &c., Machine for glossing	W. C. Machrair	198,642	Dec. 25, 1877	964	294	12	1110
Labeling-machine	C. Kuoch and S. L. Salomon	189,234	Apr. 3, 1877	199	68	11	585
Labeling-machine	H. B. Smith	198,700	Dec. 25, 1877	1020	310	12	1118
Lacing hook	E. Maynz	198,646	Dec. 25, 1877	970	295	12	1111
Lactometer	L. Heusner	190,587	May 8, 1877	485	145	11	818
Ladder	J. W. Allen	190,112	May 1, 1877	1	1	11	747
Ladder	N. S. Boynton	189,690	Apr. 17, 1877	693	214	11	665
Ladder	H. L. Eanes	191,413	May 29, 1877	1325	402	11	954
Ladder	M. Foss	195,497	Sept. 25, 1877	775	227	12	533
Ladder	S. B. Seymour	197,294	Nov. 20, 1877	596	177	12	863
Ladder, Adjustable	G. Crawford	197,766	Dec. 4, 1877	62	20	12	955
Ladder and steps combined	J. Lane	196,679	Oct. 30, 1877	1046	303	12	743
Ladder, Extensible step	H. P. Kochsmeier	197,146	Nov. 13, 1877	432	128	12	831
Ladder, Extension	J. Berg	195,563	Sept. 25, 1877	833	247	12	542
Ladder, Extension	L. C. Boyington	195,440	Sept. 25, 1877	717	212	12	525
Ladder, Extension	L. Hauerwas	194,089	Aug. 14, 1877	310	91	12	283
Ladder, Extension	O. Sherwood, jr	187,324	Feb. 13, 1877	411	129	11	270
Ladder, Fire-escape	A. d'Amore	198,576	Dec. 25, 1877	895	273 274	12	1100
Ladder, Fire-escape	H. B. Walbridge	193,431	July 24, 1877	915	278	12	160
Ladder, Fireman's	N. S. Boynton	197,324	Nov. 20, 1877	631	186	12	867
Ladder, Folding	A. S. Riches	194,467	Aug. 21, 1877	714	213	12	343
Ladder, Step	T. Duncan	194,583	Aug. 28, 1877	833	248	12	369
Ladder, Step	G. Gay	193,081	July 17, 1877	542	164	12	102
Ladder, Step	A. Larkin	196,650	Oct. 30, 1877	1047	303	12	743
Ladder, Step	O. Sherwood, jr	190,086	Apr. 24, 1877	1125	342	11	729
Ladle: *See* Metal-founding ladle.							
Lamp	L. J. Atwood	187,800	Feb. 27, 1877	901	280	11	350
Lamp	A. Z. Boda	186,980	Feb. 6, 1877	69	21	11	211
Lamp	A. Burbank	194,071	Aug. 14, 1877	290	86, 87	12	281
Lamp	W. A. Butler	189,186	Apr. 3, 1877	153	53	11	579
Lamp	C. Capel	195,571	Sept. 25, 1877	841	250	12	543
Lamp	G. Chappel	190,004	Apr. 24, 1877	1034	315	11	718
Lamp	J. F. Dour	188,238	Mar. 13, 1877	285	89	11	424
Lamp	E. S. Drake	197,109	Nov. 13, 1877	399	117	12	825
Lamp	J. Funck	198,600	Dec. 25, 1877	918	280	12	1104
Lamp	H. C. Hart	197,630	Nov. 27, 1877	959	285	12	925
Lamp	B. Hempstead	192,259	June 19, 1877	775	235	11	1095
Lamp	C. F. A. Hinrichs and C. Reistle	186,732	Jan. 30, 1877	928	288	11	168
Lamp	C. F. A. Hinrichs	198,300	Dec. 18, 1877	623	189	12	1051
Lamp	C. T. Holloway and W. H. H. Stineman.	190,037	Apr. 24, 1877	1070	326	11	722
Lamp	H. L. Ives	196,581	Oct. 30, 1877	952	276	12	730
Lamp	J. Kirby, jr	190,050	Apr. 24, 1877	1089	331	11	724
Lamp	J. D. Lane	198,632	Dec. 25, 1877	956	291	12	1109
Lamp	J. Lewtas	187,761	Feb. 27, 1877	862	268	11	345
Lamp	J. C. Mairs	188,649	Mar. 20, 1877	693	213	11	489
Lamp	W. McCarthy	193,015	July 10, 1877	470	142	12	85
Lamp	E. C. McCloy	191,987	June 12, 1877	467	144	11	1013
Lamp	R. S. Merrill	187,766	Feb. 27, 1877	863	269	11	345
Lamp	S. S. Newton	187,409	Feb. 13, 1877	488	152	11	280
Lamp	S. S. Newton	189,131	Apr. 3, 1877	102	27	11	573
Lamp	S. S. Newton	195,227	Sept. 18, 1877	501	147	12	486
Lamp	L. H. Olmsted	188,533	Mar. 20, 1877	582	180	11	474

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Lamp	L. H. Olmsted	190,069	Apr. 24, 1877	1107	337	11	727
Lamp	L. H Olmsted	190,894	May 15, 1877	804	238	11	867
Lamp	L. H. Olmsted	195,725	Oct. 2, 1877	36	11	12	566
Lamp	L. H. Olmsted	196,762	Nov. 6, 1877	26	7	12	764
Lamp	L. H. Olmsted	197,165	Nov. 13, 1877	452	133	12	834
Lamp	C. Reistle	188,542	Mar. 20, 1877	589	182	11	475
Lamp	F. Rhind	193,673	July 31, 1877	1182	354	12	206
Lamp	N. L. Rigby	189,655	Apr. 17, 1877	660	204	11	661
Lamp	D. Seawright	198,500	Dec. 25, 1877	831	252	12	1090
Lamp	G. Simmonds	192,294	June 19, 1877	817	248	11	1100
Lamp	F. B. Squire and C. G. Little	198,425	Dec. 18, 1877	743	224	12	1069
Lamp	W. Staehlen	186,765	Jan. 30, 1877	960	298	11	172
Lamp	W. H. H. Stineman	198,430	Dec. 18, 1877	747	226	12	1070
Lamp	W. Westlake	188,270	Mar. 13, 1877	312	98, 99	11	428
Lamp	D. Whiteford	188,998	Mar. 27, 1877	1049	323	11	546
Lamp	D. Whiteford	188,999	Mar. 27, 1877	1050	323	11	546
Lamp and blow-pipe, Combined spirit	S. Needles	190,241	May 1, 1877	123	37	11	762
Lamp and gas-lighter combined	J. A. Plaut	192,347	June 26, 1877	888	267	11	1121
Lamp and lantern	J. H. Richardson	193,282	July 17, 1877	754	231	12	130
Lamp-black, Machine for making	J. K. Hallock	195,709	Oct. 2, 1877	18	5	12	563
Lamp-black, Machinery for making	P. Neff	197,395	Nov. 20, 1877	698	209	12	879
Lamp-black, Process and apparatus for making	J. Rogers	186,498	Jan. 23, 1877	703	216	11	128
Lamp-bracket	J. W. Birch	195,564	Sept. 25, 1877	833	248	12	542
Lamp-bracket	C. Bliven and G. D. Parker	190,271	May 1, 1877	157	46	11	766
Lamp-bracket	J. Forster	193,153	July 17, 1877	616	187	12	112
Lamp-bracket	A. D. and E. M. Judd	198,118	Dec. 11, 1877	413	129	12	1015
Lamp-bracket	T. J. Jury	195,289	Sept. 18, 1877	565	164	12	495
Lamp-bracket	G. Sherwin and E. Hoople	189,064	Apr. 3, 1877	49	18, 19	11	566
Lamp-burner	A. Angell	188,490	Mar. 20, 1877	543	167	11	468
Lamp-burner	E. Blackman	194,763	Sept. 4, 1877	6	2	12	401
Lamp-burner	J. H. Boardman	187,090	Feb. 6, 1877	164	54	11	225
Lamp-burner	T. M. Brintnall and R. C. Weilbacher.	197,715	Dec. 4, 1877	6	2	12	947
Lamp burner	E. L. Bryant	187,595	Feb. 20, 1877	678	211	11	313
Lamp-burner	E. L. Bryant	194,327	Aug. 21, 1877	573	171	12	324
Lamp-burner	J. Cain	191,830	June 12, 1877	317	98	11	1023
Lamp-burner	W. L. Carter	187,810	Feb. 27, 1877	914	283	11	352
Lamp-burner	H. H. Doty	186,201	Jan. 16, 1877	394	120	11	76
Lamp-burner	C. A. Ferren	188,347	Mar. 13, 1877	387	121	11	439
Lamp-burner	J. G. Hallas and W. N. Weeden	189,542	Apr. 10, 1877	532	166	11	636
Lamp burner	B. Hempstead	191,141	May 22, 1877	1063	318	11	909
Lamp-burner	F. Holt	196,901	Nov. 6, 1877	171	50	12	784
Lamp burner	B. Labarthe, A. Guillemare, and L. Pallas.	187,645	Feb. 20, 1877	732	226	11	319
Lamp-burner	E. C. Lawrence	190,877	May 15, 1877	788	233	11	865
Lamp-burner	J. Rasch	190,249	May 1, 1877	131	39	11	763
Lamp-burner	C. C. Richmond	198,683	Dec. 25, 1877	1003	305	12	1115
Lamp-burner	A. W. Sangster	193,186	July 17, 1877	645	196	12	116
Lamp-burner	T. Silver	187,987	Mar. 6, 1877	32	8	11	385
Lamp-burner	W. Silvester	192,945	July 10, 1877	406	121	12	76
Lamp-burner	R. Wetherill	198,719	Dec. 25, 1877	1038	316	12	1121
Lamp-burner	S. R. Wilmot	195,241	Sept. 18, 1877	519	151	12	489
Lamp, Candle	C. Kienle	186,139	Jan. 9, 1877	323	99	11	60
Lamp, Car	W. Westlake	188,271	Mar. 13, 1877	313	99	11	428
Lamp, Cast-metal	L. P. Fries	187,839	Feb. 27, 1877	943	293	11	356
Lamp, Center	G. Sherwin and E. Hoople	189,063	Apr. 3, 1877	48	17, 18	11	565
Lamp, Center	G. Sherwin and E. Hoople	189,065	Apr. 3, 1877	51	19	11	566
Lamp-chimney	E. W. Blackhall	196,328	Oct. 23, 1877	685	198	12	681
Lamp-chimney	S. B. Inglis	197,856	Dec. 4, 1877	148	45	12	967
Lamp-chimney	H. L. Ives	189,359	Apr. 10, 1877	356	114	11	613
Lamp-chimney	G. W. Martin	197,153	Nov. 13, 1877	440	129	12	832
Lamp-chimney	W. H. Mason	189,945	Apr. 24, 1877	969	296	11	709
Lamp-chimney	J. McMurtry	190,886	May 15, 1877	796	236	11	866
Lamp-chimney	S. R. Wilmot	195,195	Sept. 11, 1877	455	136	12	472
Lamp-chimney cleaner	A. H. Jackson	186,934	Feb. 6, 1877	21	10	11	205
Lamp-chimney cleaner	C. P. Palmer	186,609	Jan. 23, 1877	809	250	11	142
Lamp-chimney cleaner	C. P. Palmer	188,069	Mar. 6, 1877	108	33	11	395
Lamp-chimney fastening	G. Richards	191,884	June 12, 1877	364	112	11	1029
Lamp-chimney lens attachment	G. W. Martin	193,013	July 10, 1877	467	142	12	85
Lamp chimney, shade, and globe combined	G. W. Martin	190,882	May 15, 1877	791	235	11	865
Lamp-chimneys, Device for crimping	A. Harcum	188,626	Mar. 20, 1877	663	205	11	486
Lamp, Coal-oil	A. Winterburn	192,210	June 19, 1877	715	219	11	1088
Lamp-collar	J. G. Brothwell	186,106	Jan. 9, 1877	292	88	11	56
Lamp-collars, Machine for threading	J. G. Hallas	187,007	Feb. 6, 1877	91	31	11	214
Lamp-extinguisher	E. C. Blakeslee	189,335	Apr. 10, 1877	335	107	11	610
Lamp-extinguisher	G. D. Kilmer	191,976	June 12, 1877	457	141	11	1042
Lamp-extinguisher	S. N. Long	193,882	Aug. 7, 1877	75	24	12	245
Lamp-extinguisher	E. Mercier	198,139	Dec. 11, 1877	436	136	12	1018
Lamp-extinguisher	P. Neddo and F. H. Walton	188,935	Mar. 27, 1877	989	304	11	538
Lamp-extinguisher	L. H. Pilger	186,059	Jan. 9, 1877	251	75	11	50
Lamp-extinguisher	F. Rhind	197,174	Nov. 13, 1877	462	136	12	835
Lamp-extinguisher	B. H. Robb	187,910	Feb. 27, 1877	1043	312	11	365
Lamp-extinguisher	M. Waterbury	190,650	May 8, 1877	557	166	11	827
Lamp-extinguisher, Automatic	W. T. Wood	189,826	Apr. 17, 1877	827	255	11	682
Lamp, Fishing and wharf	L. L. Wilson and L. S. Keagle	196,613	Oct. 30, 1877	978	285	12	734
Lamp-flame extinguisher	C. T. Colby	186,414	Jan. 23, 1877	628	191	11	118
Lamp font, Oil	J. W. Carter	194,953	Sept. 11, 1877	209	65	12	437
Lamp for burning hydrocarbon oils for railway signals, &c.	F. H. Smith	194,735	Aug. 28, 1877	966	287	12	387
Lamp for burning hydrocarbon oils, &c	D. McCarty	189,246	Apr. 3, 1877	215	72	11	587
Lamp for burning naphtha-gas	W. W. Austin	194,121	Aug. 14, 1877	360	107	12	288
Lamp for carriages, Imitation	G. E. Whitmore	187,949	Feb. 27, 1877	1048	322	11	370
Lamp for heating a tailor's goose	J. Reokio	192,130	June 19, 1877	634	194	11	1077

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Lamp-fount	E. W. Andreo	196,551	Oct. 30, 1877	924	267	12	726
Lamp, Fountain	E. J. M. Becker	187,959	Mar. 6, 1877	3	1	11	381
Lamp, Fountain	W. A. Butler	188,584	Mar. 20, 1877	628	194	11	481
Lamp, Fountain	E. J. Stearns	189,398	Apr. 10, 1877	394	125, 126	11	618
Lamp-globe base	E. Blackman	196,286	Oct. 23, 1877	641	186	12	675
Lamp, Hanging	E. C. Lawrence	186,939	Feb. 6, 1877	27	11	11	205
Lamp-heating attachment	C. I. Payne	194,810	Sept. 4, 1877	83	27	12	412
Lamp, Hydrocarbon-gas	R. W. Park	189,780	Apr. 17, 1877	786	242	11	677
Lamp, Kerosene	S. Dodsworth	187,828	Feb. 27, 1877	931	289	11	354
Lamp-lighter	H. W. P. Colson	189,702	Apr. 17, 1877	705	217	11	667
Lamp-lighter	W. P. Wentworth	188,269	Mar. 13, 1877	311	98	11	428
Lamp-lighting apparatus, Electric	W. H. Zimmerman	188,220	Mar. 6, 1877	255	80	11	413
Lamp, Miner's	J. J. Weinel	188,705	Mar. 20, 1877	746	229	11	496
Lamp, Night	M. S. Chase	195,983	Oct. 9, 1877	308	86	12	612
Lamp, Night	H. W. Huntington	189,100	Apr. 3, 1877	79	28	11	570
Lamp or chandelier, Oil	J. F. Lauth	189,110	Apr. 3, 1877	86	31	11	571
Lamp, Oven	T. F. Greenleaf	197,266	Nov. 20, 1877	569	168	12	858
Lamp, Petroleum	W. Dette	198,085	Dec. 11, 1877	378	119	12	1010
Lamp, Pneumatic	G. W. Cook	191,032	May 22, 1877	963	286	11	895
Lamp, Pocket	J. Kutscher	190,597	May 8, 1877	496	148	11	819
Lamp-post	W. De Lany	192,418	June 26, 1877	956	286	11	1131
Lamp-refractor	A. Schaeffer and A. Pfrunder	191,888	June 12, 1877	368	113	11	1030
Lamp-rest and shade-holder combined	P. J. Clark and J. Kintz	193,438	July 24, 1877	921	280	12	161
Lamp, Safety	E. S. Drake	197,110	Nov. 13, 1877	400	117	12	825
Lamp, Safety	D. R. Harder	190,432	May 8, 1877	336	98	11	798
Lamp safety attachment	L. W. P. Gray	192,647	July 3, 1877	98	28	12	25
Lamp safety-collar	J. H. Lewars	190,879	May 15, 1877	790	234	11	865
Lamp safety-valve	J. H. Lewars and C. Klaitz	193,525	July 24, 1877	1609	304	12	173
Lamp-screen holder	J. E. Hubbell	189,224	Apr. 3, 1877	189	65	11	584
Lamp-shade	M. D. Marcy	198,131	Dec. 11, 1877	430	134	12	1017
Lamp shade and globe	F. S. Shirley	187,423	Feb. 13, 1877	502	156	11	282
Lamp-shade and reflector combined	J. W. Drake	197,020	Nov. 13, 1877	299	88	12	811
Lamp-shade holder	P. J. Clark and J. Kintz	192,153	June 19, 1877	662	202	11	1080
Lamp-shade holder	A. H. Duff	191,755	June 12, 1877	238	75	11	1014
Lamp-shade holder	H. L. Ives	189,102	Apr. 3, 1877	80	29	11	570
Lamp, Street	J. Irwin	188,142	Mar. 6, 1877	173	53	11	403
Lamp, Street and park	J. Stimpson	189,514	Apr. 10, 1877	499	158	11	632
Lamp, Student	J. Kirby, jr	190,049	Apr. 24, 1877	1088	331	11	724
Lamp-support	R. H. Ryau	192,600	July 3, 1877	44	13	12	18
Lamp-tray	D. G. Mark	193,376	July 24, 1877	865	265	12	153
Lamp-trimmer	E. Stone	193,052	July 10, 1877	510	153	12	89
Lamp-trimmer	E. Stone	193,053	July 10, 1877	510	153	12	89
Lamp, Vacuum	H. Wellington	190,104	Apr. 24, 1877	1147	349	11	732
Lamp, Vapor	J. Benson	186,100	Jan. 9, 1877	288	86	11	55
Lamp, Vapor	J. Benson	186,102	Jan. 9, 1877	289	87	11	55
Lamp, Wall	H. Wellington	195,551	Sept. 25, 1877	820	243	12	540
Lamp-wick	H. C. Scott	197,902	Dec. 4, 1877	195	59	12	974
Lamp-wick, Mineral	C. F. A. Hinrichs	196,148	Oct. 16, 1877	491		12	646
Lamps, Device for lighting night	J. R. Rowlands	189,499	Apr. 10, 1877	486	154	11	630
Lamps, &c., Filler-mouth for	C. Chinnock	194,800	Sept. 4, 1877	104	33	12	415
Lamps, Heater attachment for	C. A. Howard	186,839	Jan. 30, 1877	1043	322	11	183
Lamps, Jet-pipe for gas	G. Johnson	195,714	Oct. 2, 1877	23	7	12	764
Lamps, &c., to their supports, Attaching	S. S. Barrie	195,331	Sept. 18, 1877	601	177	12	501
Land-roller	W. Gates	187,121	Feb. 6, 1877	195	64	11	229
Land-roller	L. M. Stegner	188,484	Mar. 20, 1877	538	165	11	468
Land-roller, Agricultural	G. R. Kidder	194,003	Aug. 28, 1877	844	252	12	371
Land-roller and harrow combined	H. and J. Wagoner and F. Horn	195,189	Sept. 11, 1877	449	134	12	471
Landau quarter-light	R. Dunn	188,785	Mar. 27, 1877	845	256	11	5-8
Lantern	G. A. Beidler	195,744	Oct. 2, 1877	55	16	12	568
Lantern	E. F. Cash and A. L. Baron	191,401	May 29, 1877	1314	399	11	952
Lantern	A. M. Duburn	196,885	Nov. 6, 1877	156	46	12	782
Lantern	R. Hammill	191,959	June 12, 1877	441	137	11	1039, 1040
Lantern	E. K. Haynes	197,217	Nov. 20, 1877	523	154	12	852
Lantern	L. G. Huntington	196,580	Oct. 30, 1877	951	275	12	730
Lantern	O. I. King	193,257	July 17, 1877	727	222	12	127
Lantern	E. B. Requa	194,465	Aug. 21, 1877	712	212	12	343
Lantern	E. B. Requa	195,648	Sept. 25, 1877	914	272	12	554
Lantern	C. J. Rogers	190,449	May 8, 1877	353	102	11	800
Lantern	D. Sherwood	192,087	June 19, 1877	592	180	11	1072
Lantern-burner	A. S. Parks and L. E. Bathrick	187,480	Feb. 20, 1877	578	149	11	299
Lantern, Carriage	T. Wigley	195,683	Sept. 25, 1877	947	283	12	558
Lantern, Pocket	G. E. Parker	190,073	Apr. 24, 1877	1113	338	11	727
Lantern, Signal	R. D. Evans and W. M. Wood	198,011	Dec. 11, 1877	311	96	12	1000
Lantern, Signal	R. J. Hamilton	187,376	Feb. 13, 1877	458	144	11	276
Lantern, Signal	H. E. Pond	188,671	Mar. 20, 1877	713	219	11	492
Lap-board	G. L. Price	186,875	Jan. 30, 1877	1080	334	11	187
Lap-link	L. E. Burdin	192,972	July 10, 1877	432	130	12	80
Lap-robe	L. Briggs	197,821	Dec. 4, 1877	115	35	12	962
Lapping-machines, Arrangement of	J. Batty	188,495	Mar. 20, 1877	548	168, 169	11	469
Lard-cooler	W. P. Harvey	189,032	Apr. 3, 1877	22	7	11	561
Lard-cooler	H. Rieman	195,535	Sept. 25, 1877	807	239	12	538
Lard, fruit, &c., press	E. W. Fawcett	194,232	Aug. 14, 1877	462	140	12	363
Lard, Self-raising	T. H. Rosser	192,716	July 3, 1877	161		12	35
Last	C. E. Cree	189,085	Apr. 3, 1877	66	24	11	568
Last	L. Darozir	187,824	Feb. 27, 1877	927	288	11	353
Last	J. R. Jacques	196,151	Oct. 16, 1877	493	143	12	646
Last	J. T. Poole	193,421	July 24, 1877	907	276	12	159
Last-block fastener	W. Miller	194,878	Sept. 4, 1877	121	37	12	417
Last-block fastener	B. C. Young	194,756	Aug. 28, 1877	990	294	12	390
Last-block fastening	W. P. Beers	186,977	Feb. 6, 1877	62	21	11	210
Lasting apparatus	G. W. Copeland	197,610	Nov. 27, 1877	937	279	12	921

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Lasting-jack	C. H. Collins	187,819	Feb. 27, 1877	923	286	11	353
Latch and bolt combined	J. A. Sherman	188,308	Mar. 13, 1877	348	110	11	433
Latch and handle for the same, Locking	C. B. Rose	194,925	Sept. 4, 1877	169	52, 53	12	423
Latch and roller, Gate and door	J. T. Foster	191,417	May 29, 1877	1328	403	11	954
Latch-bolt lock	J. G. Newell	191,994	June 12, 1877	473	146	11	1044
Latch, Car-door	J. Capron	196,741	Nov. 6, 1877	4	2	12	761
Latch, Carriage-door	C. W. Blackman	196,074	Jan. 9, 1877	262	79	11	52
Latch, Chain-fastening	G. C. Setchell and W. W. Higgins	194,473	Aug. 21, 1877	720	214	12	344
Latch, Closet	W. E. Sparks	190,792	May 15, 1877	711	210	11	854
Latch, Cupboard	O. F. Fogelstrand	194,139	Aug. 14, 1877	377	112	12	291
Latch, Door	W. A. Barlow	187,698	Feb. 27, 1877	799	248	11	337
Latch, Door, &c	G. F. Joyce	193,092	July 17, 1877	565	170	12	104
Latch, Door, &c	C. H. Smith	194,789	Sept. 4, 1877	36	12	12	405
Latch, Door, &c	A. C. Woolman	191,216	May 22, 1877	1137	342	11	920
Latch, Gate	C. B. and M. S. Austin	192,889	July 10, 1877	357	105	12	69
Latch, Gate	J. D. Cameron	193,750	July 31, 1877	1247	374	12	217
Latch, Gate	T. Cameron and J. F. Jowers	195,339	Sept. 18, 1877	609	179	12	502
Latch, Gate	W. H. Carpenter	197,544	Nov. 27, 1877	870	259	12	912
Latch, Gate	C. B. Clark	195,798	Oct. 2, 1877	103	30	12	576
Latch, Gate	J. J. Deal	186,715	Jan. 30, 1877	915	283	11	166
Latch, Gate	W. F. Eaton	197,112	Nov. 13, 1877	401	118	12	826
Latch, Gate	J. Neill	190,976	May 22, 1877	907	268	11	888
Latch, Gate	A. Newbrough	194,166	Aug. 14, 1877	403	120	12	294
Latch, Gate	R. E. Stephens	196,718	Oct. 30, 1877	1083	314	12	748
Latch, Gate	H. Unger	193,678	July 31, 1877	1186	355	12	207
Latch, Gate	A. C. Woolman	193,630	July 31, 1877	1133	340	12	200
Latch, Gate and door	A. L. Beardsley	192,966	July 10, 1877	428	128	12	79
Latch, Knob	W. A. Barlow	189,013	Apr. 3, 1877	5	2	11	559
Latch, Knob	M. C. Niles	187,889	Feb. 27, 1877	989	306	11	362
Latch, Knob	M. C. and S. S. Niles	192,343	June 26, 1877	882	266	11	1121
Latch, Knob	M. C. and S. S. Niles	192,344	June 26, 1877	884	266	11	1121
Latch, Knob	E. Parker	188,258	Mar. 13, 1877	300	94	11	427
Latch, Knob	C. H. Stewart	188,826	Mar. 27, 1877	887	270	11	524
Latch, Locking	P. H. Baker	194,637	Aug. 28, 1877	873	260	12	375
Latch, Locking	H. A. Chase	189,191	Apr. 3, 1877	157	55	11	580
Latch, Locking	J. Haptonstall	192,988	July 10, 1877	445	134	12	81
Latch, Locking	J. J. King	192,515	June 26, 1877	1052	316	11	1143
Latch, Reversible	J. A. Brook	197,594	Nov. 27, 1877	920	274	12	919
Latch, Reversible	W. F. and H. J. Hall	195,270	Sept. 18, 1877	548	159	12	493
Latch, Reversible	H. S. Pomeroy	186,161	Jan. 9, 1877	342	105	11	62
Latch, Reversible	W. E. Sparks	198,704	Dec. 25, 1877	1023	311	12	1118
Latch, Reversible knob	H. Essex	188,346	Mar. 13, 1877	387	121	11	438
Latch, Reversible knob	W. M. Griscom and F. Grussman	186,556	Jan. 23, 1877	759	233	11	135
Latch, Reversible knob	N. O'Brien	190,356	May 1, 1877	237	70	11	777
Latch, Reversible knob	W. E. Sparks	190,162	May 1, 1877	51	14	11	753
Latches, Knob-lever for mortise	C. S. Jennings	187,015	Feb. 6, 1877	98	33	11	215
Lath, Board	A. A. Smith	189,664	Apr. 17, 1877	667	207	11	662
Lath-holder	B. W. Hoyt	198,388	Dec. 18, 1877	706	214	12	1663
Lath-machine	E. C. Dicey	189,613	Apr. 17, 1877	619	191	11	655
Lath-machine and products	W. S. Davis	194,077	Aug. 14, 1877	295	88	12	281
Lath-making machine	N. Shaw and D. Kennedy	187,323	Feb. 13, 1877	407	128 129	11	270
Lath-sawing machine	J. W. Calkins	186,795	Jan. 30, 1877	993	309	11	176
Lathe-dog	S. G. North and A. M. Norton	193,721	July 31, 1877	1221	366	12	212
Lathe center and carrier combined	C. A. Niebell	189,953	Apr. 24, 1877	975	298	11	710
Lathe, Clothes-pin	A. Hall, jr.	196,353	Oct. 23, 1877	710	204	12	685
Lathe-cutter	J. Du Bois	196,644	Oct. 30, 1877	1014	294	12	739
Lathe for cutting screw-taps	G. R. Stetson	191,894	June 12, 1877	375	115	11	1031
Lathe for turning bobbins	W. R. Landfear	195,291	Sept. 18, 1877	566	165	12	495
Lathe for turning irregular bodies	F. Arbey	186,701	Jan. 30, 1877	903	279	11	164
Lathe for turning paper-mill rolls	C. Parent	196,593	Oct. 30, 1877	963	279	12	732
Lathe for turning pottery-ware	W. Donaldson	197,616	Nov. 27, 1877	945	281	12	922
Lathe-gear	J. N. Tannahill	188,033	Mar. 6, 1877	81	23	11	391
Lathe, Jeweler's	J. A. De Vries	196,077	Oct. 16, 1877	411	119	12	635
Lathe, Metal-turning	J. W. Post	198,211	Dec. 18, 1877	527	163	12	1038
Lathe, Metal-working	S. W. Putnam	192,129	June 19, 1877	632	193 194	11	1077
Lathe rest, Metal	T. F. Carver	187,353	Feb. 13, 1877	433	136	11	273
Lathe stop, Engine	C. A. Cooley	193,850	Aug. 7, 1877	49	16	12	241
Lathe-tool	E. F. Beugler	191,560	June 5, 1877	49	15	11	983
Lathe tool-holder	S. Gissinger	192,499	June 26, 1877	1031	310	11	1140
Lathe, Watch-maker's	C. Hopkins	196,228	Oct. 16, 1877	570	165	12	657
Lathe, Wood-turning	G. S. Rix	193,834	Aug. 7, 1877	35	12	12	239
Lathe-work carrier	G. Harman	190,137	May 1, 1877	23	6	11	749
Lathes, Carving attachment for	F. Arbey	186,702	Jan. 30, 1877	904	280	11	164
Lathes, Cutter-holder for metal	F. D. Hazelton	188,010	Mar. 6, 1877	53	15	11	388
Lathes, Device for lifting work into and out of	E. Knight	195,220	Sept. 18, 1877	493	146	12	486
Lathes, Indicator for truing work in	A. Hatch	191,586	June 5, 1877	70	21	11	986
Lathes, Slide-rest for watch-makers'	C. Hopkins	193,609	July 31, 1877	1109	333	12	197
Lathes, Tool-post for	R. Neasham	195,769	Oct. 2, 1877	75	22	12	572
Lathing, Metallic	J. W. Hoyt	187,142	Feb. 6, 1877	213	69	11	232
Laundry apparatus	G. C. Bovey	190,409	May 8, 1877	312	92	11	795
Lawn-seat	J. R. Wherry	193,738	July 31, 1877	1236	371	12	215
Lawn-sprinkler	J. S. Heacock	188,628	Mar. 20, 1877	665	206	11	486
Lawn-sprinkler	W. A. and D. M. Kirby	197,733	Dec. 4, 1877	27	9	12	950
Lead-furnace bottom	T. Bisch	189,016	Apr. 3, 1877	7	3	11	559
Lead-pipe coupling and joint	H. Reinecke	186,758	Jan. 30, 1877	954	296	11	172
Leaf-turner	A. L. Clark	189,698	Apr. 17, 1877	701	216	11	666
Leaf-turner	D. J. Ferry	197,025	Nov. 13, 1877	306	91	12	812
Leaf-turner	D. W. G. Humphroy	191,055	May 22, 1877	983	292	11	898
Leaf-turner	A. Merkt	197,285	Nov. 20, 1877	587	174	12	861
Leaf-turner	C. Schwerdtfeger	193,781	July 31, 1877	1281	385	12	221
Leather, Catch-hook for suspending	C., jr., J. T., and E. Chambors	187,456	Feb. 20, 1877	554	171	11	296

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Leather, &c., Composition for staining or dyeing	G. S. Wolff	194,754	Aug. 28, 1877	989		12	390
Leather, Composition for surfacing	D. Flannery	194,551	Aug. 28, 1877	802		12	364
Leather-covered nut	L. T. Smith	186,375	Jan. 16, 1877	576	176	11	98
Leather-crimping machine	A. J. F. Howard	190,143	May 1, 1877	32	9	11	150
Leather-crimping machine	S. W. Jamison	198,622	Dec. 25, 1877	944	288, 289	12	1107
Leather-crimping machine	J. Smith	193,191	July 17, 1877	649	197, 198	12	117
Leather-crimping machines, Form for	J. D. Bacon	195,789	Oct. 2, 1877	94	28	12	575
Leather cutting and folding machine	J. W. and R. H. Lufkin	191,006	May 22, 1877	938	277, 278	11	892
Leather-cutting die	A. Warren	189,406	Apr. 10, 1877	401	127	11	619
Leather-cutting gage	G. E. Lindsay	189,563	Apr. 17, 1877	570	177	11	649
Leather, Device for automatically measuring area of sides of.	M. V. B. Etheridge	194,662	Aug. 28, 1877	897	268	12	378
Leather, &c., Device for automatically measuring the superficial area of sides of.	F. F. Tapley	194,743	Aug. 28, 1877	978	290, 291	12	388
Leather, Electroplated shell or cylinder for imitating	H. R. Cassel	193,922	Aug. 7, 1877	120	38	12	251
Leather folding and crimping machine	E. Corbett, F. W. Coy, and J. E. Wheeler.	191,837	June 12, 1877	322	100	11	1024
Leather for ornamentation	H. Huck	190,040	Apr. 24, 1877	1073	327	11	722
Leather from woolen or vegetable fabric, Manufacturing artificial.	A. G. Fell	187,611	Feb. 20, 1877	697		11	315
Leather goods, Machine for stamping	L. H. Urner	189,155	Apr. 3, 1877	124	44	11	576
Leather, Machine for whitening and buffing	W. A. Perkins	191,173	May 22, 1877	1093	327	11	913
Leather, Machinery for scouring and dressing	W. Panton	193,615	July 31, 1877	1115	335	12	198
Leather-punching apparatus	W. P. Willoughby	193,583	July 24, 1877	1066	319	12	180
Leather-punching machine	R. Brownson	197,326	Nov. 20, 1877	634	187	12	868
Leather-punching machine	G. Marks	185,938	Jan. 2, 1877	130	39	11	25
Leather-rolling machine	A. Hawver	194,906	Sept. 4, 1877	147	46	12	421
Leather-rolling machine	H. Hudson	194,352	Aug. 21, 1877	598	179	12	328
Leather-rolling machine	A. F. Stowe	198,473	Dec. 25, 1877	802	243, 244	12	1087
Leather-rounding machine	T. S. Reed	196,480	Oct. 23, 1877	832	240	12	702
Leather, Sample of	J. Kent	196,673	Oct. 30, 1877	1039	302	12	742
Leather scouring and dressing machinery	T. L. Baheney	194,806	Sept. 4, 1877	52	17	12	407
Leather-scrubbing cylinder	A. Hawver	194,905	Sept. 4, 1877	147	46	12	421
Leather-skiving machine	C. F. Packard	193,028	July 10, 1877	483	146	12	86
Leather splitting and beveling machinery	C. Dancel and E. C. Smith	196,197	Oct. 16, 1877	537	156	12	652
Leather-splitting machine	H. N. Cook	197,098	Nov. 13, 1877	389	114	12	824
Leather-splitting machine	J. Hodskinson	191,855	June 12, 1877	338	104	11	1026
Leather-staining compound	G. S. Wolff	190,660	May 8, 1877	567		11	828
Leather straps, Attaching device for	T. H. Sabin	196,939	Nov. 6, 1877	212	62	12	769
Leather straps, Machinery for shaping and creasing	S. B. Randall	192,528	June 26, 1877	1064	321	11	1144
Leather-stretching machinery	J. Sharp	190,693	May 15, 1877	617	183	11	842
Leather, Tanning and dyeing	G. De Cordova, M. Wise, and H. N. Darrell.	196,339	Oct. 23, 1877	697		12	683
Leather, Utilizing scrap	C. Hummel and F. Padberg	197,636	Nov. 27, 1877	964	287	12	925
Leather whitening and shaving machine	J. G. Buzzell	191,400	May 29, 1877	1313	398	11	952
Leech, Artificial	F. F. McDonald	186,592	Jan. 23, 1877	795	245	11	140
Leg and foot rest	T. Weddle	195,425	Sept. 18, 1877	691	204	12	513
Leg, Artificial	C. Collins	193,396	July 24, 1877	882	270	12	156
Leg, Artificial	J. Dawes	187,603	Feb. 20, 1877	686	213	11	314
Lemon-squeezer	J. H. Spencer	192,301	June 19, 1877	823	250	11	1101
Lenses, Apparatus for the focal measurement of optical.	H. Lomb and F. Scharpf	190,028	Oct. 9, 1877	352	100	12	619
Letter-box	M. Bragaldi	192,146	June 19, 1877	651	200	11	1079
Letter-box	R. Hale	197,849	Dec. 4, 1877	141	43	12	966
Letter-box	E. T. Marsh	186,429	Jan. 23, 1877	641	196	11	120
Letter-box, bell, and door-plate combined	C. B. Geer	195,598	Sept. 25, 1877	868	258	12	547
Letter-scales	J. V. H. Nott	186,267	Jan. 16, 1877	451	138	11	84
Letter sheet and envelope	W. T. Berry	192,411	June 26, 1877	951	285	11	1130
Letter sheet and envelope	L. H. Rogers	192,131	June 19, 1877	635	194	11	1077
Letter-sheet and envelope combined	L. Ehrlich	190,478	May 8, 1877	384	112	11	804
Letter-sheet and envelope combined	R. W. Stevens	197,678	Nov. 27, 1877	998	298	12	930
Letting-off mechanism	J. P. Buzzell	195,883	Oct. 9, 1877	199	57	12	598
Level	T. H. Burk	189,679	Apr. 3, 1877	61	23	11	567
Level	S. Gissinger	191,954	June 12, 1877	435	134	11	1039
Level	O. Pickering	198,311	Dec. 18, 1877	631	192	12	1053
Level and square, Combined spirit	J. E. Kitchin	196,234	Oct. 16, 1877	578	167	12	657
Level, Spirit	F. T. Ward and T. Bedworth	191,389	May 29, 1877	1302	394	11	951
Lever-clamp	V. Yantis	188,718	Mar. 20, 1877	758	233	11	498
Life-boat	C. E. Beaumont	198,267	Dec. 18, 1877	598	181	12	1047
Life-boat	T. W. Casey	196,874	Nov. 6, 1877	145	43	12	781
Life-boat	P. B. Curtis	188,862	Mar. 27, 1877	922	281	11	529
Life-boat	C. Dickenson	188,782	Mar. 27, 1877	843	256	11	517
Life-boat and launching apparatus	F. X. Huber, D. Lindauer, and A. J. Lerché.	195,216	Sept. 18, 1877	489	144	12	485
Life-boat, Sectional	G. Bates	189,297	Apr. 10, 1877	294	93	11	605
Life-buoy and water velocipede, Combined	G. Drevar	193,365	July 24, 1877	855	262	12	152
Life-preserver	D. Kahnweiler	192,832	July 10, 1877	304	89	12	62
Life-preserving dress	C. Grin	190,577	May 8, 1877	477	142	11	817
Life-saving apparatus	W. S. Green	195,002	Sept. 11, 1877	255	78	12	443
Lifter: *See* Brick and tile lifter. Plate-lifter. Skylight-lifter. Transom-lifter.							
Lifting-jack	I. Arthur	197,198	Nov. 20, 1877	505	149	12	849
Lifting-jack	S. and D. Barrow	193,844	Aug. 7, 1877	45	15	12	241
Lifting-jack	W. J. M. Batchelder	191,824	June 12, 1877	310	96	11	1022
Lifting-jack	W. Z. Black	193,138	July 17, 1877	605	183	12	110
Lifting-jack	D. W. Brown	190,413	May 8, 1877	317	93	11	796
Lifting-jack	E. T. Carswell	195,572	Sept. 25, 1877	842	250, 251	12	543
Lifting-jack	T. J. and C. C. Case	191,110	May 22, 1877	1035	309	11	905

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Lifting-jack	W. G. Cline	194,893	Sept. 4, 1877	133	41	12	419
Lifting-jack	C. F. Davis	186,315	Jan. 16, 1877	495	151	11	90
Lifting jack	T. R. Day	193,931	Aug. 7, 1877	132	40	12	252
Lifting-jack	M. Durnell	188,109	Mar. 6, 1877	111	42	11	399
Lifting-jack	J. U. Fiester	192,248	June 19, 1877	763	232	11	1093
Lifting-jack	C. Gaillard, jr	187,707	Feb. 27, 1877	810	251	11	338
Lifting-jack	F. Griscom	189,856	Apr. 24, 1877	883	270	11	698
Lifting-jack	R. Hermance	195,927	Oct. 9, 1877	250	70	12	604
Lifting-jack	G. W. Hunter	192,370	June 26, 1877	910	273	11	1125
Lifting-jack	A. R. Hurst	189,463	Apr. 10, 1877	455	143	11	625
Lifting-jack	T. J. Jenne	192,831	July 10, 1877	304	89	12	61
Lifting-jack	I. D. Johnson	190,718	May 15, 1877	648	192	11	846
Lifting-jack	V. Johnson	189,468	Apr. 10, 1877	458	144	11	626
Lifting-jack	J. S. Kirkwood	194,827	Sept. 4, 1877	72	24	12	410
Lifting-jack	F. M. Lottridge	186,402	Jan. 16, 1877	605	185	11	102
Lifting-jack	J. P. McGrew	192,651	July 3, 1877	101	29	12	26
Lifting-jack	L. Meeker	198,654	Dec. 25, 1877	978	298	12	1112
Lifting-jack	L. Meeker	198,656	Dec. 25, 1877	980	298	12	1112
Lifting-jack	S. E. Mosher	194,711	Aug. 28, 1877	942	280	12	384
Lifting-jack	D. M. Ross	186,368	Jan. 16, 1877	563	171	11	97
Lifting-jack	J. H. Rubicam	195,172	Sept. 11, 1877	434	129	12	469
Lifting-jack	J. Weathers	191,737	June 5, 1877	211	67	11	1005
Lifting-jack	J. G. Winters	192,554	June 26, 1877	1089	329	11	1148
Lifting-jack for carriages, &c	G. S. Jones	188,467	Mar. 20, 1877	522	161	11	466
Light:							
See Drop-light.	Landau-light.						
Electric light.	Signal-light.						
Head-light.	Sky-light.						
Helmet-light.							
Light-house signaling apparatus	C. G. Van Otter	188,700	Mar. 20, 1877	741	227	11	496
Lighting device	I. M. Roso	196,706	Oct. 30, 1877	1070	311	12	746
Lightning-conductor	W. Brown	196,518	Oct. 30, 1877	892	257	12	721
Lightning-conductor	H. W. Spang	196,493	Oct. 23, 1877	847	244	12	704
Lightning-rod	L. Adams	193,469	July 24, 1877	951	289	12	166
Lightning-rod	J. Hewitt	193,654	July 31, 1877	1167	349	12	204
Lightning-rod	G. S. Knapp	196,235	Oct. 16, 1877	579	167	12	658
Lightning-rod	W. W. Patterson	193,991	Aug. 7, 1877	192	58	12	260
Lightning-rod	C. H. Smith	192,628	July 3, 1877	74	22	12	22
Lightning-rod	C. H. Smith	198,471	Dec. 25, 1877	800	243	12	1086
Lightning-rod	N. Van Loon	188,444	Mar. 13, 1877	490	152	11	452
Lightning-rod	N. Van Loon	190,391	May 1, 1877	277	81	11	782
Lightning-rod	L. D. Vermilya	189,286	Apr. 3, 1877	259	86	11	592
Lightning-rod and insulator	J. C. Chambers	194,220	Aug. 14, 1877	448	136	12	301
Lightning-rod conductor	A. Goss	196,350	Oct. 23, 1877	707	203	12	685
Lightning-rod connecting clip	A. Snook	186,503	Jan. 23, 1877	707	217	11	128
Lightning-rod coupling	L. Bradley	189,298	Apr. 10, 1877	295	94	11	605
Lightning-rod coupling	W. S. Reyburn and F. J. Martin	186,877	Jan. 30, 1877	1080	334	11	187
Lightning-rod coupling	C. H. Smith	192,718	July 3, 1877	163	46	12	35
Lightning-rod for oil-tanks	J. A. Sherriff	189,326	Apr. 10, 1877	329	105	11	609
Limb, Artificial	E. Osborne	197,943	Dec. 11, 1877	242	75	12	989
Limb, Artificial	G. L. Ridsdale	197,741	Dec. 4, 1877	35	11	12	951
Lime and magnesia from their silicates and aluminates, Manufacture of hypochlorites of.	E. Solvay	196,258	Oct. 16, 1877	604		12	661
Lime-kiln	M. Callan	191,566	June 5, 1877	54	16	11	984
Lime-kiln	J. W. Devling	186,233	Jan. 16, 1877	421	129	11	80
Line-fastener	D. S. Coonrod	186,667	Jan. 30, 1877	871	269	11	160
Line-fastener	J. T. Cronk	186,991	Feb. 6, 1877	78	26	11	212
Line-fastener	A. S. Goodrich	188,047	Mar. 6, 1877	91	27	11	392
Line-fastener	D. H. Levy	187,021	Feb. 6, 1877	102	35	11	216
Line-fastener	J. Thomas	188,485	Mar. 20, 1877	538	166	11	468
Link, Adjustable	C. J. E. Thompson	193,295	July 17, 1877	769	236	12	132
Link, Connecting	T. W. Griffin	196,293	Oct. 23, 1877	651	188	12	676
Link, Detachable	S. Stevens	187,927	Feb. 27, 1877	1029	317	11	367
Link, Spring	W. W. Campbell	188,101	Mar. 6, 1877	133	40	11	398
Lip and strainer	F. G. and W. F. Niedringhaus	190,155	May 1, 1877	44	13	11	152
Lips and strainers, Attaching	F. G. and W. F. Niedringhaus	186,433	Jan. 23, 1877	644	197	11	120
Liquid-cooling apparatus	A. D. Puffer	189,137	Apr. 3, 1877	107	39	11	574
Liquid-cooling apparatus	H. B. Scharmann	190,082	Apr. 24, 1877	1122	340	11	728
Liquid-diffuser	G. M. Smyth	190,789	May 15, 1877	709	209	11	854
Liquid-heater	N. M. Simonds	190,631	May 8, 1877	534	159	11	824
Liquid-meter	E. Marsland	186,014	Jan. 9, 1877	206	62	11	44
Liquids, Conveyance of	G. W. Remsen	190,902	May 15, 1877	811	240	11	868
Liquids from bottles, Indicator for drawing	I. Levi	186,400	Jan. 16, 1877	601	184	11	101
Liquids, Vessel for holding	W. F. Sherman	196,487	Oct. 23, 1877	842	242	12	703
Liquor, Device for decanting	E. Snyder	186,175	Jan. 9, 1877	357	109	11	64
Liquor shaker and strainer	W. H. Trepus	196,605	Oct. 30, 1877	973	282	12	733
Loading vessels and moving heavy articles, Portable apparatus for.	S. Marsden	192,872	July 10, 1877	341	100	12	66
Lock:							
See Alarm-lock.	Master-key lock.						
Bolt-lock.	Nut-lock.						
Button-lock.	Permutation-lock.						
Car-door lock.	Piano-lock.						
Carriage-door lock.	Pistol-lock.						
Carriage-seat lock.	Pocket-book lock.						
Combination-lock.	Rail-joint-bolt lock.						
Desk-lock.	Railway-nut lock.						
Door-lock.	Rowlock.						
Drawer-lock.	Satchel-lock.						
Fire-arm lock.	Seal-lock.						
Gun-lock.	Stopper-lock.						
Hasp-lock.	Strap-lock.						
Latch-bolt lock.	Time-lock.						

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Lock—Continued.							
See Traveling-bag lock. Wagon-lock.							
Valise, &c., lock. Wagon-brake lock.							
Vehicle-brake lock. Wagon-seat lock.							
Lock and chain fastening combined	C. Parham	188,664	Mar. 20, 1877	708	217	11	491
Lock and electric burglar-alarm	P. Seiler	194,932	Sept. 4, 1877	175	54	12	424
Lock and key	C. A. Gerard	195,118	Sept. 11, 1877	377	114	12	461
Lock and key	A. H. Palmer	191,462	May 29, 1877	1378	416	11	960
Lock and latch combined	J. Vetter	197,531	Nov. 27, 1877	857	255	12	910
Lock-case	C. H. Lambkin	190,341	May 1, 1877	223	66	11	775
Lock-face plate	A. Stewart	191,191	May 22, 1877	1108	331	11	916
Lock-key	R. A. Abbott and M. W. Parrish	188,722	Mar. 27, 1877	773	237	11	509
Lock-key	W. M. Griscom	197,817	Dec. 4, 1877	140	42	12	966
Lock key	T. Hendricks	188,011	Mar. 6, 1877	54	16	11	388
Lock-key	J. Schade	189,503	Apr. 10, 1877	491	155	11	630
Lock-key	C. H. Stewart	188,827	Mar. 27, 1877	888	270	11	524
Lock-key	W. H. Taylor	189,521	Apr. 10, 1877	505	160	11	633
Lock-key	W. H. Taylor	193,569	July 24, 1877	1053	316	12	178
Locks, Hub for	J. Schade	192,020	June 12, 1877	501	153	11	1047
Locks, Tumbler for permutation	T. Fox	190,571	May 8, 1877	471	140	11	816
Locket	C. A. Faas	193,758	July 31, 1877	1257	377	12	218
Locomotive	T. T. V. Smith	188,971	Mar. 27, 1877	1027	316	11	543
Locomotive	J. E. Wootten	192,725	July 3, 1877	168	48	12	36
Locomotive air-feeding attachment	W. S. Hutchinson	197,730	Dec. 4, 1877	22	7	12	949
Locomotive, Canal	G. de Nottbeck	193,147	July 17, 1877	611	185	12	111
Locomotive crank-pins, Machine for turning	L. B. Flanders	188,008	Mar. 6, 1877	51	14, 15	11	387
Locomotive-engine	A. M. Cumming	189,704	Apr. 17, 1877	707	218	11	667
Locomotive-engine	W. Wells	186,285	Jan. 16, 1877	464	143	11	86
Locomotive-engine cylinders, Oil-box for	W. A. Foster	192,160	June 19, 1877	667	204	11	1081
Locomotive-engine fire-box	H. E. Woods	193,586	July 24, 1877	1068	320	12	180
Locomotive-engines, Exhaust mechanism for	J. P. Clark	197,720	Dec. 4, 1877	13	4	12	948
Locomotive exhaust apparatus	E. Longstreth	186,587	Jan. 23, 1877	790	243	11	139
Locomotive exhaust-pipe	J. C. Farmer	186,417	Jan. 23, 1877	630	192	11	118
Locomotive exhaust-regulator	J. D. Murray	194,456	Aug. 21, 1877	700	209	12	341
Locomotive fire-box	J. C. Hayward	192,507	June 26, 1877	1041	313	11	1142
Locomotive furnace-door	W. W. Hubbell	191,147	May 22, 1877	1068	320	11	910
Locomotive sand-box	S. E. Mosher	188,399	Mar. 13, 1877	445	138	11	446
Locomotive-tenders with fuel, Device for supplying	W. C. Hamner	193,703	July 31, 1877	1207	362	12	210
Locomotive, Traction	J. Batley	198,266	Dec. 18, 1877	597	180	12	1047
Locomotive traction-wheel	J. Larmanjat	192,923	July 10, 1877	385	114, 115	12	73
Locomotives with water, Stand-pipe for supplying	H. Smith	189,665	Apr. 17 1877	668	207	11	662
Log-carrier	W. R. Shadman	197,295	Nov. 26, 1877	596	177	12	863
Log-turner	R. E. Gleason	197,465	Nov. 27, 1877	786	234, 235	12	900
Logwood, Machine for cutting and grinding	C. P. Hayes	198,614	Dec. 25, 1877	937	286	12	1106
Loom	A. Gartenmann	186,824	Jan. 30, 1877	1022	316, 317	11	180
Loom	E. H. Graham	194,517	Aug. 28, 1877	771	229	12	360
Loom	L. J. Knowles	186,350	Jan. 16, 1877	546	165, 166	11	95
Loom	E. Oldfield	196,694	Oct. 30, 1877	1058	307, 308	12	745
Loom	W. Riding	198,156	Dec. 11, 1877	452	141, 142	12	1020
Loom	A. Smith and H. Skinner	186,374	Jan. 16, 1877	570	173, 174, 175, 176	11	98
Loom	B. L. Stowe	194,740	Aug. 28, 1877	970	288, 289	12	388
Loom	H. D. Wood	186,970	Feb. 6, 1877	55	19	11	209
Loom	H. Wyman	197,754	Dec. 4, 1877	49	15, 16, 17	12	953
Loom-belt-shipping mechanism	L. J. Knowles	197,641	Nov. 27, 1877	968	288	12	926
Loom-belt-shipping mechanism	L. J. Knowles	198,202	Dec. 18, 1877	519	160	12	1036
Loom-belt-shipping mechanism	L. J. Knowles	198,203	Dec. 18, 1877	520	160	12	1036
Loom, Circular	J. E. Gillespie	189,353	Apr. 10, 1877	348	112, 113	11	612
Loom, Circular	B. L. Stowe	194,741	Aug. 28, 1877	974	289, 290	12	388
Loom for weaving hair-cloth	M. R. Kenyon	197,732	Dec. 4, 1877	24	7, 8, 9	12	950
Loom for weaving hair-cloth	W. J. Porter	192,006	June 12, 1877	487	149	11	1045
Loom for weaving looped or pile fabrics	J. Rothwell	192,659	July 3, 1877	114	31	12	27
Loom, Gimp	R. Stone	189,515	Apr. 10, 1877	500	158	11	632
Loom, Hand	W. P. Clements and J. H. Cagle	196,137	Oct. 16, 1877	481	140	12	644
Loom-harness, Machine for making	J. Sladdin	192,296	June 19, 1877	818	249	11	1101
Loom-harness motion	J. Shinn	193,782	July 31, 1877	1283	385, 386	12	221
Loom-heddle	J. M. Flagg	196,522	Oct. 30, 1877	895	258	12	722
Loom let-off mechanism	D. E. Keating	192,514	June 26, 1877	1051	316	11	1143
Loom let-off mechanism	Y. Widdup and S. J. Thompson	189,002	Mar. 27, 1877	1054	324	11	547
Loom-picker	J. W. Barlow	192,482	June 26, 1877	1010	306	11	1138
Loom-picker	J. Brennand and T. Hampson	196,134	Oct. 16, 1877	479	139	12	644
Loom-picker	S. S. Walker	188,321	Mar. 13, 1877	365	114	11	435
Loom shedding mechanism	W. R. Andrews	192,960	July 10, 1877	421	127	12	78
Loom shedding mechanism	J. S. Ashworth and J. J. Hauson	191,296	May 29, 1877	1228	369	11	940
Loom shedding mechanism	H. Wolbold	192,040	June 12, 1877	525	162	11	1050
Loom shedding mechanism	H. Wyman	195,686	Sept. 25, 1877	949	283, 284	12	558
Loom shedding or harness operating mechanism	G. Crompton and H. Wyman	191,317	May 29, 1877	1213	374	11	943
Loom-shuttle	C. W. Anderson	188,400	Mar. 20, 1877	515	159	11	465
Loom-shuttle	D. H. Chamberlain	188,281	Mar. 13, 1877	323	102	11	429

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Loom-shuttle	L. Dumas	190,566	May 8, 1877	467	139	11	815
Loom-shuttle	A. Hallowell	186,674	Jan. 30, 1877	877	271	11	161
Loom-shuttle	C. J. Higgins	197,131	Nov. 13, 1877	419	123	12	828
Loom-shuttle	C. Lewando	189,633	Aug. 17, 1877	636	197	11	658
Loom-shuttle	E. W. Marble	188,926	Mar. 27, 1877	982	301	11	537
Loom-shuttle	A. Wright	188,489	Mar. 20, 1877	542	167	11	468
Loom, Shuttle-box	J. Hyde	187,281	Feb. 13, 1877	363	116	11	264
Loom shuttle-box mechanism	F. Christen	189,922	Apr. 24, 1877	947	290	11	707
Loom shuttle-box mechanism, Power	P. Hickey and C. W. Miles	192,580	July 3, 1877	26	8	12	16
Loom shuttle-box motion	J. Shinn	193,783	July 31, 1877	1285	386	12	221
Loom shuttle-box motion, Power	R. B. Goodyear	194,771	Sept. 4, 1877	14	4	12	402
Loom shuttle-box motion, Power	J. Long, jr	188,523	Mar. 20, 1877	575	177	11	473
Loom shuttle, Spindle	J. Hamilton	192,692	July 3, 1877	144	40	12	32
Loom stop-motion	F. Christen	190,741	May 15, 1877	668	198	11	848
Loom stop-motion	J. H. Mortimore	196,590	Oct. 30, 1877	960	278	12	731
Loom-stopping mechanism	J. Megson	195,767	Oct. 2, 1877	73	22	12	571
Loom take-up	J. Lyall	191,692	June 5, 1877	171	53	11	999
Loom, Tape	R. Mueller	186,602	Jan. 23, 1877	802	248	11	141
Loom-temple	W. H. Burns	192,897	July 10, 1877	363	107	12	69
Loom-temple	A. Porter and J. A. Clark	188,538	Mar. 20, 1877	586	181	11	474
Loom-temple	C. H. Schlaf	190,783	May 15, 1877	704	208	11	853
Loom-temple	J. E. Waterbury	191,907	June 12, 1877	385	119	11	1032
Loom-temple	D. Wright	197,236	Nov. 20, 1877	542	160	12	854
Loom weft-fork	S. Cook	195,485	Sept. 25, 1877	762	224	12	532
Looms, Filling stop-motion for	J. M. Linscott	191,062	May 22, 1877	989	294	11	899
Looms, Harness-cording for power	L. J. Knowles	191,600	June 5, 1877	84	25	11	988
Looms, Mechanism for operating the harnesses of fancy.	I. L. Wilber	198,555	Dec. 25, 1877	877	267, 268	12	1097
Looms, Mechanism for shifting drop shuttle-box in.	H. Lyman	193,309	July 17, 1877	781	239	12	133
Looms, Pattern-chain for	C. Strobel	188,981	Mar. 27, 1877	1036	318	11	544
Looms, Preparing warps for	W. Heaton	186,249	Jan. 16, 1877	433	133	11	82
Looms, Shuttle-driving mechanism for narrow-ware	W. B. Willard	191,392	May 29, 1877	1305	395	11	951
Looms, Shuttle for narrow-ware	G. Fischer, G. F. Kek, and J. B. Sharp.	187,369	Feb. 13, 1877	451	142	11	275
Looms, Staff-picker for	A. I. Earle	189,712	Apr. 17, 1877	714	220	11	668
Loose-rim wheel	R. Jacobi	185,929	Jan. 2, 1877	119	36	11	23
Lounge	J. J. Coburn	188,592	Mar. 20, 1877	635	196	11	482
Lounge, Bed	F. Jensen	198,301	Dec. 18, 1877	624	189	12	1051
Lounge, Bed	S. M. Michelsen and L. Hax	197,389	Nov. 20, 1877	693	207, 208	12	877
Lounges, Reversible back for	J. Sullivan	187,932	Feb. 27, 1877	1033	318	11	367
Low-water alarm	T. Bingham and T. J. McTighe	190,116	May 1, 1877	3	2	11	747
Lozenge-machine	C. H. Hall	190,754	May 15, 1877	679	201	11	850
Lubricating and anti-incrustating compound	I. Bernhard	185,886	Jan. 2, 1877	69		11	17
Lubricating compound	B. French	195,890	Oct. 9, 1877	207		12	599
Lubricating compound	J. Johnson	193,710	July 31, 1877	1213		12	211
Lubricating compound	G. G. Munger	198,664	Dec. 25, 1877	988		12	1113
Lubricating compound	P. M. Papin	188,479	Mar. 20, 1877	534		11	467
Lubricating compound	J. H. Pitt	193,280	July 17, 1877	753		12	130
Lubricating compound	G. W. Sweeney	191,488	May 29, 1877	1409		11	963
Lubricating compound	P. Sweeney	191,490	May 29, 1877	1410		11	963
Lubricating compound	P. Sweeney	191,491	May 29, 1877	1411		11	963
Lubricating compound	C. Toppan	186,640	Jan. 23, 1877	837		11	146
Lubricator: *See* Axle-lubricator. Journal-lubricator. Cylinder-lubricator. Steam-engine lubricator.							
Lubricator	W. A. Clark	187,964	Mar. 6, 1877	8	2	11	382
Lubricator	F. Collignon	196,742	Nov. 6, 1877	5	2	12	761
Lubricator	G. H. Flower	196,650	Oct. 30, 1877	1021	297	12	740
Lubricator	A. M. Higgins and N. Devereux	198,022	Dec. 11, 1877	319	99	12	1001
Lubricator	D. Jenkins	187,387	Feb. 13, 1877	468	146	11	277
Lubricator	J. C. Lamb	189,752	Apr. 17, 1877	759	233	11	673
Lubricator	A. G. Myers	197,162	Nov. 13, 1877	450	133	12	833
Lubricator	C. H. Parshall	191,171	May 22, 1877	1090	326	11	913
Lubricator	C. H. Parshall	191,707	June 5, 1877	184	58	11	1001
Lubricator	S. Rushworth	192,193	June 19, 1877	699	214	11	1085
Lubricator	A. S. Skinner	192,025	June 12, 1877	506	155	11	1043
Lubricator	H. Winter	192,887	July 10, 1877	356	105	12	68
Lumber, Compound and ornamental	C. F. Ritchel	193,833	Aug. 7, 1877	35	11	12	239
Lumber-drier	J. J. Curran	189,432	Apr. 10, 1877	426	124	11	622
Lumber for transportation in flumes, &c., Connecting	W. H. Thurman	187,681	Feb. 20, 1877	761	236	11	323
Lumber, Machine for manufacturing compound	W. E. Brock	192,673	July 3, 1877	128	35	12	29
Lumber-trimming machine	T. J. Frazier	192,498	June 26, 1877	1030	310	11	1140
Lunch-heater, Portable	M. Bradley	195,255	Sept. 18, 1877	533	155	12	491
M.							
Machinery motor, Light	A. J. Hoed	193,956	Aug. 7, 1877	154	48	12	256
Magnetic battery for curative purposes	G. Edard	198,008	Dec. 11, 1877	308	94, 95	12	999
Magnete-electric machine	C. F. Brush	189,997	Apr. 24, 1877	1016	311, 312	11	716
Magnifying-glasses, Stand for	L. Heath	198,542	Dec. 25, 1877	867	264	12	1096
Mail-bag	E. W. Glover	186,827	Jan. 30, 1877	1025	317	11	181
Mail-bag	F. R. Huot	187,862	Feb. 27, 1877	964	299	11	358
Mail-bag	J. C. Lowell	188,249	Mar. 13, 1877	294	92	11	426
Mail-bag	E. H. Parker	188,403	Mar. 13, 1877	449	139	11	447
Mail-bag catch	G. H. Carver and E. A. Munger	194,577	Aug. 28, 1877	824	245	12	367
Mail-bag catch	W. S. Hamlin	195,710	Oct. 2, 1877	20	6	12	563
Mail-bag catch	C. D. Merry	197,388	Nov. 20, 1877	691	207	12	877
Mail-bag catch	G. F. Shaver	195,956	Oct. 9, 1877	278	78	12	608
Mail-bag crane	J. A. Boals	196,421	Oct. 23, 1877	769	223	12	691
Mail-bag crane	F. W. Bridenbecker	195,567	Sept. 25, 1877	837	249	12	513
Mail-bag fastening device	J. Metz and E. Hinman	192,124	June 19, 1877	629	191	11	1076
Mallet	A. Holbrook	192,867	July 10, 1877	336	99	12	66

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Malt and grain drier	A. Palmer	197,740	Dec. 4, 1877	33	11	12	951
Malt-crushers, Attachment to	C. Stoll	186,636	Jan. 23, 1877	834	258	11	146
Malt extract from husks or refuse of brewers' mash, Apparatus for separating.	H. R. Randall	190,899	May 15, 1877	808	239	11	867
Malt extract, Manufacturing	H. R. Randall	187,313	Feb. 13, 1877	398		11	368
Malt-kiln	H. Altenbrand	189,678	Apr. 17, 1877	681	210	11	664
Malt liquors, Compound for clarifying	H. Jünemann	197,640	Nov. 27, 1877	967	288	12	926
Malt sirup or extract, Manufacture of	O. F. Boomer and H. R. Randall	187,250	Feb. 31, 1877	332		11	259
Malting of grain	J. A. Saladin	192,292	June 19, 1877	813	248	11	1100
Mandrel, Expanding	C. H. Amann and L. A. Harker	191,634	June 5, 1877	115	35	11	992
Mandrel, Expanding	C. W. Le Count	198,633	Dec. 25, 1877	957	292	12	1109
Manger	J. N. Crabb	195,351	Sept. 18, 1877	618	182	12	503
Manger	I. Van Riper	194,485	Aug. 21, 1877	729	217	12	345
Mangle	G. C. Broom	187,504	Feb. 20, 1877	601	186	11	302
Mangle	H. E. Smith	188,685	Mar. 20, 1877	726	223	11	494
Mantel for fire-places, Iron	T., J. M., and T. E. Scantlin	195,903	Oct. 9, 1877	222	63	12	600
Manure, Apparatus for distributing liquid	J. D'Heureuse	190,293	May 1, 1877	178	53	11	769
Manure-drill	A. C. Hurley	191,682	June 5, 1877	163	50	11	998
Manure-drill	A. B. Miller and R. P. Ludwig	198,037	Dec. 11, 1877	332	103	12	1003
Manure-spreader	J. S. Kemp	190,220	May 1, 1877	105	30, 31	11	760
Map, Mounted	A. McNally	190,608	May 8, 1877	506	150	11	821
Mapping, Geometric block for	J. M. Boorman	185,889	Jan. 2, 1877	72	23	11	18
Marble, &c., Artificial	W. Dwight	195,920	Oct. 9, 1877	237		12	603
Marble, Artificial	C. Schaeffer	193,041	July 10, 1877	499		12	88
Marble, Compound for artificial	R. P. Coughlin	196,971	Nov. 13, 1877	253		12	804
Marble, granite, &c., Machine for cutting	R. R. Atchison	191,821	June 12, 1877	307	95	11	1022
Marker, Corn	H. C. and W. T. Sharp	192,534	June 26, 1877	1070	322	11	1145
Marker, Corn	M. Zimmerman	189,008	Mar. 27, 1877	1058	326	11	547
Marker, Corn-row	T. A. Cole	188,502	Mar. 20, 1877	553	171	11	470
Marker for planting corn, Land	S. J. Pefley	194,459	Aug. 21, 1877	704	210	12	342
Marker, Seed	R. Megginson	185,942	Jan. 2, 1877	134	40	11	25
Marking ground, Machine for	F. W. Byrne	190,819	May 15, 1877	735	217	11	858
Martingale-ring	W. Courtenay	198,534	Dec. 25, 1877	861	262	12	1095
Mash, Preparation of	A. Schwarz	197,413	Nov. 20, 1877	717	214	12	881
Mash, Preparing	R. D'Heureuse	191,942	June 12, 1877	423		11	1037
Mash-rake	A. I. Guthrie	193,507	July 24, 1877	988	299	12	170
Mash-tun	J. Gecmen	198,102	Dec. 11, 1877	393	124	12	1012
Mashing apparatus	A. W. Oppmann	194,559	Aug. 28, 1877	808	240	12	365
Mashing-machine	J. Brandenburg	190,185	May 1, 1877	75	21	11	756
Mask, Smoke-excluding	G. Neally	195,300	Sept. 18, 1877	574	167	12	496
Master-key lock	F. C. Yanda	189,294	Apr. 3, 1877	269	88	11	593
Master-wheel and adjustable traverse-pinion, &c.	M. B. Erskine	186,817	Jan. 30, 1877	1013	315	11	180
Masts, Deck support for ship's	E. Robbins	197,980	Dec. 11, 1877	282	86	12	995
Masts, Peak-bolt for	M. Stevens	192,302	June 19, 1877	824	251	11	1101
Mat: *See* Bed-mat. Picture and show-card mat. Passe-partout mat. Stove-mat.							
Match-box	W. B. Coulter	186,115	Jan. 9, 1877	300	91	11	57
Match-box	H. Ellig	193,859	Aug. 7, 1877	57	18	12	242
Match-box	J. A. Kratt	188,250	Mar. 13, 1877	295	92	11	426
Match-safe	J. A. Field	191,576	June 5, 1877	63	19	11	985
Match-safe	E. K. Haynes	193,246	July 17, 1877	714	219	12	125
Match-safe	W. L. Hubbell and F. Ochs	195,928	Oct. 9, 1877	251	71	12	604
Match-safe	N. D. Wright and C. C. Hill	196,734	Oct. 30, 1877	1100	320	12	751
Match-splint machine	H. M. Underwood and W. P. Holliday.	196,131	Oct. 16, 1877	475	138	12	643
Match, stamp, &c., holder	C. Scofield	198,692	Dec. 25, 1877	1012	308	12	1117
Match-sticks, Machine for cutting and sticking	M. Young	194,319	Aug. 21, 1877	564	169	12	323
Match-sticks, Machine for making	M. Young	187,576	Feb. 20, 1877	661	206	11	310
Matches for dipping, Preparing	P. Beer	196,864	Nov. 6, 1877	130	39	12	779
Matches, Method of and apparatus for dipping	W. H. Swift and J. F. Wilson	196,315	Oct. 23, 1877	674	194	12	680
Mattress	T. Flagler	196,442	Oct. 23, 1877	791	228	12	697
Mattress	S. A. Shepherd	195,850	Oct. 2, 1877	159	44	12	583
Mattress	J. A. Torrey	187,992	Mar. 6, 1877	37	9	11	385
Mattress, Spring	A. C. McMains	187,660	Feb. 20, 1877	744	230	11	321
Mattresses, Box for making	J. H. Gallagher	193,501	July 24, 1877	982	297	12	170
Meal-bin	J. C. Durbin	195,809	Oct. 2, 1877	113	34	12	577
Meal-cabinet	J. M. Evans	186,719	Jan. 30, 1877	918	{284 285}	11	167
Measure and funnel, Combined graduated	S. Schippert	195,846	Oct. 2, 1877	154	43	12	583
Measure, Bias	J. K. Somes	192,135	June 19, 1877	639	195	11	1078
Measure, Dose	G. Colmer	197,017	Nov. 13, 1877	296	87	12	810
Measure, Drill-cable	M. W. Barse and H. W. Moore	197,080	Nov. 13, 1877	368	108	12	821
Measure, Dry	J. T. Capewell	196,192	Oct. 16, 1877	533	154	12	652
Measure, Liquid	S. R. Dummer	189,345	Apr. 10, 1877	341	109	11	611
Measure, Liquid	L. B. Healy	193,761	July 31, 1877	1261	378	12	218
Measure, Liquid	W. K. Johnston	191,971	June 12, 1877	453	140	11	1041
Measure, Liquid	M. C. Richards	188,188	Mar. 6, 1877	224	70, 71	11	409
Measure, Speed	J. S. Wilson	196,407	Oct. 23, 1877	760	219	12	693
Measure, Tailor's	G. H. Lasar	190,686	May 15, 1877	611	182	11	841
Measure, Tape	C. D. Ward	194,317	Aug. 21, 1877	562	169	12	323
Measures, Cover for liquid	C. C. Redmond	194,784	Sept. 4, 1877	31	10	12	404
Measures, Gage attachment for beer	G. J. Cave and G. E. Nicholson	195,980	Oct. 9, 1877	305	85	12	611
Measuring and registering device	C. R. Wedelin	194,630	Aug. 28, 1877	867	{258 259}	12	374
Measuring apparatus for seed-heaters	E. S. Taylor	198,706	Dec. 25, 1877	1025	312	12	1119
Measuring device for hatters' use	J. A. Harrington	191,674	June 5, 1877	155	48	11	997
Measuring device for seed-bag fillers	W. Blake	198,532	Dec. 25, 1877	859	261	12	1094
Measuring device for seed-heaters	R. Macdonald	193,168	July 17, 1877	630	191	12	114
Measuring heights, Apparatus for	N. F. Yagn	197,444	Nov. 20, 1877	752	224	12	887
Measuring machine, Cloth	C. B. Allyn	187,796	Feb. 27, 1877	897	279	11	350
Measuring machine, Cloth	G. P. Baker	192,962	July 10, 1877	423	127	12	78

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Measuring machine, Cloth	A. W. Barker	193,592	July 31, 1877	1094	327, 328	12	195
Measuring machine, Cloth	T. M. Brintnall	193,219	July 17, 1877	682	208	12	121
Measuring machine, Cloth	A. Brown	186,661	Jan. 30, 1877	866	268	11	159
Measuring machine, Cloth	J. Loff	193,767	July 31, 1877	1268	380	12	219
Measuring machine, Cloth	W. D. Porter	194,462	Aug. 21, 1877	706	210	12	342
Measuring packaged fabrics	V. A. Bond	188,279	Mar. 13, 1877	320	101	11	429
Meat and vegetable cutter	W. H. Goodchild and S. F. Hay	186,829	Jan. 30, 1877	1028	318, 319	11	181
Meat-block	N. Wells	195,317	Sept. 18, 1877	590	173	12	499
Meat-can	A. C. Lautenschlager	195,139	Sept. 11, 1877	397	119	11	464
Meat-can	J. Sears	196,485	Oct. 23, 1877	838	241, 242	12	703
Meat-chopper	M. L. Edwards	190,017	Apr. 24, 1877	1048	319	11	719
Meat-chopper	J. H. Huber	194,302	Aug. 21, 1877	544	164	12	320
Meat-chopper	J. C. Lloyd	194,557	Aug. 28, 1877	807	240	12	365
Meat-chopper	H. P. Rankin	186,165	Jan. 9, 1877	346	106	11	63
Meat-chopper	H. Van Doren	192,099	June 19, 1877	602	183	11	1073
Meat-chopping machine	F. Doebert	186,036	Jan. 9, 1877	227	68	11	47
Meat-cutter	C. B. Andrews	186,515	Jan. 23, 1877	716	220	11	130
Meat-cutter	A. R. Gillis	191,281	May 29, 1877	1215	365	11	938
Meat-cutter	R. B. Pumphrey	194,370	Aug. 21, 1877	611	183	12	330
Meat-cutter	J. Sangster	194,730	Aug. 28, 1877	662	285	12	387
Meat-cutting device	C. Kieser	196,674	Oct. 30, 1877	1040	302	12	742
Meat, Fluid	J. L. Johnston	187,865	Feb. 27, 1877	966		11	359
Meat-holder	S. Poole	191,367	May 29, 1877	1284	388	11	948
Meat in transit, Preserving	J. Campbell	190,128	May 1, 1877	17		11	748
Meat-mangler	D. Steeples, W. A. Smith, D. Boles, and D. F. Stambaugh.	185,981	Jan. 2, 1877	165	51	11	30
Meat, Preparing extract of	H. Naumann	186,605	Jan. 23, 1877	806		11	142
Meat, Preserving	D. C. Link	194,693	Aug. 28, 1877	927	276	12	382
Meat, Preserving	W. Stone	187,930	Feb. 27, 1877	1031		11	367
Meat, Preserving and putting up	M. Brenner	188,774	Mar. 27, 1877	832	253	11	516
Meat-preserving can	M. Brenner	187,591	Feb. 20, 1877	675	210	11	312
Meat-preserving solution	P. Toninetti	195,420	Sept. 18, 1877	684		12	513
Meat-tenderer	V. Lapham	189,237	Apr. 3, 1877	204	69	11	586
Meat under pressure, Apparatus for curing	N. G. Simonds and E. M. Stevens.	191,510	May 29, 1877	1442	433	11	966
Meats, Curing	G. S. Gray	195,758	Oct. 2, 1877	66		12	570
Meats during transportation and storage, Preserving	J. J. Bate	197,314	Nov. 20, 1877	617	182	12	866
Meats, Preparing and preserving	G. W. Scollay	187,986	Mar. 6, 1877	30		11	384
Meats, Preserving	M. and L. Ottenheimer	196,929	Nov. 6, 1877	203		12	788
Mechanical movement	J. I. Etheridge	191,948	June 12, 1877	429	132	11	1038
Mechanical movement	J. P. Hammett	194,964	Sept. 11, 1877	219	68	12	438
Mechanical movement	A. F. Harvey	191,961	June 12, 1877	443	137	11	1040
Mechanical movement	E. C. Hopping	189,738	Apr. 17, 1877	745	229	11	671
Mechanical movement	A. E. Hotchkiss	193,871	Aug. 7, 1877	68	22	12	244
Mechanical movement	J. A. House	188,464	Mar. 20, 1877	518	160	11	465
Mechanical movement	J. A. House	188,465	Mar. 20, 1877	519	160	11	465
Mechanical movement	A. Hunerwadel	185,926	Jan. 2, 1877	115	35	11	23
Mechanical movement	G. W. Low	187,473	Feb. 20, 1877	571	177	11	298
Mechanical movement	J. W. Mullins	186,151	Jan. 9, 1877	333	102	11	61
Mechanical movement	N. Nilson	190,066	Apr. 24, 1877	1104	336	11	726
Mechanical movement	B. Owens	197,287	Nov. 20, 1877	590	175	12	862
Mechanical movement	H. K. Porter	186,016	Jan. 9, 1877	208	63	11	45
Mechanical movement	G. Sanford	198,416	Dec. 18, 1877	733	222	12	1067
Mechanical movement	W. A. Sutphin	196,951	Nov. 6, 1877	222	66	12	791
Mechanical movement	A. S. Todd	196,842	Nov. 6, 1877	106	32	12	776
Mechanical movement	S. Whitlock	197,438	Nov. 20, 1877	743	222	12	885
Medical compound	D. Maubeck	197,973	Dec. 11, 1877	276		12	994
Medicinal compound	J. P. Fixmer and C. A. Janssen	193,326	July 24, 1877	816		12	147
Medicinal compound	M. C. Peden	195,531	Sept. 25, 1877	805		12	538
Medicine-case	J. C. Millard	191,607	June 5, 1877	89	27	11	789
Medicine, Horse and cattle	P. H. Rymal	194,727	Aug. 28, 1877	659		12	387
Mercury as a motive power, Utilizing	T. D. Miller	196,759	Nov. 6, 1877	24	7	12	764
Metal bars, Machine for sawing	W. R. Jones	193,963	Aug. 7, 1877	161	50	12	257
Metal can	J. W. Miller and B. Coll	198,658	Dec. 25, 1877	982	299	12	1112
Metal-can tops and covers, Die for cutting and forming.	I. F. Kearns and G. Jensen	198,201	Dec. 18, 1877	518	160	12	1036
Metal composition	F. Porter	190,361	May 1, 1877	242		11	778
Metal-drawing press	O. Smith	189,277	Apr. 3, 1877	249	82, 83	11	591
Metal fork and spoon blank	H. E. Fowler	192,910	July 10, 1877	375	111	12	71
Metal-founding ladle	W. Fawcett	191,128	May 22, 1877	1049	314	11	907
Metal goods, Attaching handles to glazed	E. B. Manning	187,025	Feb. 6, 1877	106	36	11	217
Metal plates on structures, Securing	W. G. Hyndman	191,763	June 12, 1877	244	77	11	1015
Metal-reducing machine	G. J. Capewell	196,334	Oct. 23, 1877	693	199, 200	12	682
Metal rods or bars, Machine for drawing and straightening.	A. Braukman and L. Brightman	191,100	May 22, 1877	1025	307	11	904
Metal rollers, Process and apparatus for coating	H. Wilde	193,204	July 17, 1877	661	202	12	118
Metal-screw machine	N. C. Hubbell	186,477	Jan. 23, 1877	687	211	11	125
Metal seat-riser	B. Burr	187,451	Feb. 20, 1877	549	169	11	295
Metal, Shaping and finishing articles in	G. F. Evans	189,849	Apr. 24, 1877	876	268	11	697
Metal-tank	R. Tippett and D. L. Jauss	192,310	June 19, 1877	831	253	11	1102
Metal tubes, Die for drawing	S. P. M. Tasker	195,731	Oct. 2, 1877	42	12, 13	12	566
Metal tubes, Machine for welding	S. P. M. Tasker	186,768	Jan. 30, 1877	965	299	11	173
Metal tubes, Machine for welding	S. P. M. Tasker	186,769	Jan. 30, 1877	966	300	11	173
Metal-working machine, Compound	R. Bandhauer	188,494	Mar. 20, 1877	547	168	11	469
Metals, Apparatus for transferring molten	A. Steitz	196,997	Nov. 13, 1877	278	82	12	808
Metals, Machine for impressing, embossing, compressing, and shaping.	J. T. Walker	197,697	Nov. 27, 1877	1032	309	12	933
Metals, Separating	C. Wiegand	196,848	Nov. 6, 1877	111	34	12	777
Metallic can	R. T. Bush	188,583	Mar. 20, 1877	627	194	11	481
Metallic can	G. H. and J. H. Perkins	187,902	Feb. 27, 1877	1001	309	11	363

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Metallic can or vessel	C. P. Maxfield	196,758	Nov. 6, 1877	23	6	12	764
Metallic leaf, Manufacture of	A. E. Outerbridge, jr	198,209	Dec. 18, 1877	525		12	1037
Metallic plates, Machine for slitting	J. S. Atkinson	186,030	Jan. 2, 1877	220	66, 67	11	46
Metallic powders, Machine for triturating and polishing.	D. D. Parmelee	187,302	Feb. 13, 1877	385	122	11	367
Metallurgic furnace	M. A. Sutherland	186,178	Jan. 9, 1877	361	110	11	65
Metallurgic furnace	W. M. Watson	191,209	May 22, 1877	1130	338	11	919
Metallurgic furnace, Removable-hearth	A. Ponsard	190,691	May 15, 1877	614	183	11	842
Metallurgic furnacee, Producing a hot blast for	S. C. Salisbury	195,659	Sept. 25, 1877	927	276	12	555
Meter: *See* Coal-meter. Fluid-meter. Liquid-meter. Water-meter.							
Microscopes, Stage for	E. Gundlach	198,607	Dec. 25, 1877	928	283	12	1105
Middlings-separator	M. H. Alborty	194,320	Aug. 21, 1877	566	170	12	323
Middlings-separator	J. Barker	187,958	Mar. 6, 1877	2	1	11	381
Middlings-separator	S. L. Bean	188,333	Mar. 13, 1877	375	117	11	437
Middlings-separator	J. Creager and W. F. Thompson	194,585	Aug. 28, 1877	831	247	12	368
Middlings-separator	E. Dolman	188,870	Mar. 27, 1877	931	283	11	530
Middlings-separator	A. Fulton	190,572	May 8, 1877	472	140	11	816
Middlings-separator	H. Jones	194,602	Aug. 28, 1877	843	251	12	371
Middlings-separator	P. Muller	187,040	Feb. 6, 1877	118	39	11	218
Middlings-separator	M. H. Palmer	188,938	Mar. 27, 1877	992	304	11	539
Middlings-separator	C. N. Smith	190,381	May 1, 1877	262	78	11	780
Middlings-separator	G. T. Smith	187,923	Feb. 27, 1877	1025	316	11	366
Middlings-separator	G. T. Smith	194,539	Aug. 28, 1877	791	235	12	363
Middlings-separator	H. R. Winchell	194,494	Aug. 21, 1877	738	219	12	346
Milk-can	F. Albaum and J. Eisenla	195,243	Sept. 18, 1877	522	152	12	489
Milk-can	G. H. Lester	195,898	Oct. 9, 1877	217	61	12	600
Milk-can	J. D. Tudor	191,903	June 12, 1877	382	118	11	1032
Milk can and carrier	I. S. Coffin	193,321	July 24, 1877	812	249	12	146
Milk, Centrifugal machine for creaming	W. C. L. Lefeldt and C. G. O. Lentsch.	195,515	Sept. 25, 1877	792	234	12	536
Milk-cooler	E. D. Bennett	191,021	May 22, 1877	954	283	11	894
Milk-cooler	J. Bissonett	191,513	June 5, 1877	4	1	11	977
Milk-cooler	H. Clifford	188,341	Mar. 13, 1877	382	120	11	438
Milk-cooler	J. S. Elliott	195,111	Sept. 11, 1877	370	111	12	459
Milk-cooler	R. C. Greene	191,849	June 12, 1877	333	103	11	1025
Milk-cooler	E. W. Hoag	194,909	Sept. 4, 1877	150	47	12	421
Milk-cooler	C. W. Kinyon and A. T. Brown	186,482	Jan. 23, 1877	691	212	11	126
Milk-cooler	C. W. Loller	193,716	July 31, 1877	1217	365	12	212
Milk-cooler	J. Maloney	190,604	May 8, 1877	503	149	11	820
Milk-cooler	B. D. Miller	189,485	Apr. 10, 1877	474	150	11	628
Milk-cooler	E. F. Preston	193,177	July 17, 1877	637	193	12	115
Milk-cooler	O. S. Prindle	195,646	Sept. 25, 1877	912	271	12	554
Milk-cooler	L. T. Reed	192,935	July 10, 1877	395	118	12	75
Milk-cooler	C. G. Riggs	196,829	Nov. 6, 1877	91	28	12	773
Milk-cooler	W. V. Walker	187,333	Feb. 13, 1877	419	131	11	271
Milk-cooling apparatus	W. Dripps	198,537	Dec. 25, 1877	863	263	12	1095
Milk-pan	M. J. Smith, W. H. Ryer, and W. W. Clark.	187,059	Feb. 6, 1877	136	45	11	221
Milk-setting apparatus	F. G. Butler	194,510	Aug. 28, 1877	765	227	12	359
Milk-strainer, Portable	H. More	185,866	Jan. 2, 1877	50	16	11	15
Milker	A. A. Durand	198,362	Dec. 18, 1877	678	207	12	1059
Milker, Cow	W. A. Wilson	188,455	Mar. 13, 1877	501	155	11	454
Mill: *See* Bark-mill. Barley-peeling mill. Cane-mill. Cider-mill. Coffee-mill. Crushing and grinding mill. Fulling-mill. Grinding-mill. Grist-mill. Hominy-mill. Ore-mill. Paint-mill. Paper-mill. Pulverizing-mill. Quartz-mill. Rolling-mill. Saw-mill. Sorghum-mill. Stamp-mill. Windmill.							
Mill-bush	R. T. Jennings, sr	190,048	Apr. 24, 1877	1087	331	11	724
Mill-gearing	G. W. Schreurs	196,835	Nov. 6, 1877	98	30	12	774
Mill-pick	W. B. Morris	193,021	July 10, 1877	475	144	12	85
Mill-pick	J. Norman	189,772	Apr. 17, 1877	779	239	11	675
Mill-spindle bush	H. T. Ashworth	190,463	May 8, 1877	368	107	11	802
Mill-spindles, Backlash spring for	G. Buschmann and J. H. Brown	198,078	Dec. 11, 1877	369	115	12	1009
Mill-spindles, Bushing attachment to	C. F. Walters	195,910	Oct. 9, 1877	229	65	12	601
Mill-spindles, Bushing for	A. L. Tippet	188,906	Mar. 27, 1877	1039	320	11	545
Miller's paint-staff	J. Austine	196,414	Oct. 23, 1877	764	221	12	693
Millstone adjustment	A. Rants	186,019	Jan. 9, 1877	211	64	11	45
Millstone-bail	A. H. Kirk	198,732	Dec. 25, 1877	1056	321	12	1123
Millstone bail and driver	J. Craik	196,336	Oct. 23, 1877	695	200	12	683
Millstone-balance	R. K. Ent	197,023	Nov. 13, 1877	303	89	12	811
Millstone-balancing device	L. Read	192,454	June 26, 1877	987	297	11	1135
Millstone-curb	W. L. Taggart	188,439	Mar. 13, 1877	483	149	11	451
Millstone-dress	E. Deer	197,208	Nov. 20, 1877	514	152	12	850
Millstone-dress	L. S. Hogeboom	197,274	Nov. 20, 1877	577	170, 171	12	860
Millstone-dress	E. J. Morgan	186,150	Jan. 9, 1877	332	102	11	61
Millstone-dress	E. D. Speer	196,944	Nov. 6, 1877	215	63	12	790
Millstone-dress	R. S. Williams	191,740	June 5, 1877	214	68	11	1006
Millstone-dresser	J. G. Holderman	195,818	Oct. 2, 1877	125	86	12	579
Millstone-dresser	J. M. McIntyre	192,179	June 19, 1877	682	209	11	1083
Millstone-dressing device	S. Ross	193,554	July 24, 1877	1039	311	12	176
Millstone-dressing machine	J. C. Cookson and L. Rastetter	191,938	June 12, 1877	418	129	11	1036
Millstone-dressing machine	H. R. Fuller	187,613	Feb. 20, 1877	699	217	11	315
Millstone-dressing machine	T. McFeely	188,022	Mar. 6, 1877	63	18, 19	11	389
Millstone-dressing machine	T. McFeely	192,270	June 19, 1877	783	238	11	1096

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Millstone-dressing machine	F. Miller	193,173	July 17, 1877	634	192	12	114
Millstone-dressing machine	L. Moore	186,686	Jan. 30, 1877	890	275	11	162
Millstone-dressing machine	J. Orff, J. C. Cookson, and L. Rastetter.	186,869	Jan. 30, 1877	1074	332	11	186
Millstone-dressing machine	A. E. Smith	195,666	Sept. 25, 1877	932	278	12	556
Millstone-dressing machine, Diamond	H. Wilhelm and F. D. Davis	188,713	Mar. 20, 1877	752	231	11	497
Millstone-dressing tool	M. L. Mowrer	186,491	Jan. 23, 1877	697	214	11	127
Millstone-drive	F. J. Burt and J. S. Whitney	190,414	May 8, 1877	318	93	11	796
Millstone-driver	W. S. Armstrong	191,745	June 12, 1877	231	73	11	1013
Millstone-driver	A. Cunningham	193,598	July 31, 1877	1100	330	12	196
Millstone-driver	W. Johnson	190,439	May 8, 1877	342	100	11	799
Millstone-driver	J. Planck	196,930	Nov. 6, 1877	203	59	12	788
Millstone-eye	F. G. Wallace	187,204	Feb. 6, 1877	264	87	11	238
Millstone-feed regulating device	N. Hamer	190,320	May 1, 1877	203	60, 61	11	773
Millstone-feed regulator	J. W. Moir and J. H. Ellis	192,707	July 3, 1877	155	44	12	34
Millstone-proof	J. J. Rymal	188,192	Mar. 6, 1877	230	72	11	410
Millstones, Balancing and rocking	C. E. Benade	189,014	Apr. 3, 1877	5	2	11	559
Millstones, Ventilating	H. N. Leas	198,128	Dec. 11, 1877	428	133	12	1017
Mineral water, Apparatus for the manufacture of	E. Cornelis	187,357	Feb. 13, 1877	442	138	11	274
Mineral waters, Artificial production of	C. Beyschlag	190,464	May 8, 1877	368	107	11	802
Miner's drill	E. L. Powell and E. Seddon	195,645	Sept. 25, 1877	911	271	12	554
Mines, Machinery for raising from	J. Houdaille	185,922	Jan. 2, 1877	112	34	11	23
Mining and undercutting coal, Machine for	H. F. Brown	197,090	Nov. 13, 1877	378	111	12	822
Mining-buckets, Self-acting trip for	H. S. Craven	186,808	Jan. 30, 1877	1004	312	11	178
Mining-drill	T. J. Morgan	190,239	May 1, 1877	121	36	11	762
Mining-drills, Device for regulating the feed of	H. Burk	195,256	Sept. 18, 1877	534	156	12	491
Mining-machine	C. M. Hall	187,225	Feb. 13, 1877	307	100	11	256
Mining-machine	F. M. Lechner	186,854	Jan. 30, 1877	1059	327, 328	11	184
Mining-machine	F. M. Lechner	197,734	Dec. 4, 1877	28	9, 10	12	950
Mining machine, Coal	C. L. Driesslein	187,752	Feb. 27, 1877	851	265	11	344
Mining machine, Coal	J. W. Harrison	198,610	Dec. 25, 1877	931	283, 284	12	1105
Mining-powders, Device for exploding	P. Castellanos	193,485	July 24, 1877	964	293	12	167
Mining-shaft indicator	C. O. Richardson	193,462	July 24, 1877	944	287	12	165
Mirror for dressing-cases, Adjustable	S. R. Scottron	191,720	June 5, 1877	195	62	11	1003
Mirror, Toilet	J. G. Divoll	194,078	Aug. 14, 1877	296	88	12	281
Mirror, Window	P. W. Ralfs	189,139	Apr. 3, 1877	109	39	11	574
Miter-box	G. M. Conover	195,347	Sept. 18, 1877	614	181	12	502
Miter-box	J. M. Jones	187,712	Feb. 27, 1877	816	253	11	339
Miter-box	H. L. McClain	187,293	Feb. 13, 1877	375	119	11	265
Miter-box	J. A. Trant	192,139	June 19, 1877	642	196	11	1078
Miter-machine	J. P. Tierney	187,431	Feb. 13, 1877	513	158	11	283
Mitering-machine	J. H. Mosher and J. Pennington	188,657	Mar. 20, 1877	762	215	11	490
Mitering-machine	L. C. Strong and O. S. Garretson	198,472	Dec. 25, 1877	801	243	12	1086
Mixing and mashing machine	W. Von Sydow	197,955	Dec. 11, 1877	256	79	12	991
Moccasin	S. Berry	193,914	Aug. 7, 1877	112	36	12	250
Moistening-pad	C. E. Stockder	189,517	Apr. 10, 1877	502	159	11	632
Molasses-gate	S. Barker	186,193	Jan. 16, 1877	388	118	11	75
Molasses, Heater and evaporator for	B. F. Harper	189,732	Apr. 17, 1877	737	226	11	670
Mold: *See* Brick-mold. Butter-mold. Cigar-mold. Electro-plate-mold. Glass-mold. Ingot-mold. Suppository-mold. Type-mold.							
Mold-board, Revolving conical	C. V. Dyer	191,036	May 22, 1877	968	287	11	896
Mold-boards, Apparatus for bending and hardening	D. Franklin	194,423	Aug. 21, 1877	663	199	12	336
Mold for casting ribbed surfaces	S. H. Bingham	193,072	July 17, 1877	534	161	12	101
Molds and their counterparts, Making	W. B. Closson	192,112	June 19, 1877	614	187	11	1075
Molds in plaster, Producing lubricated	C. S. Brooks	187,095	Feb. 6, 1877	173		11	226
Molded articles, Composition for	H. Bayle	193,213	July 17, 1877	676		12	120
Molder's facing-powder	W. Kling	193,662	July 31, 1877	1172		12	205
Molder's flask	A. Barker	197,537	Nov. 27, 1877	864	257	12	911
Molder's flask and its accessories	H. L. Eames	198,490	Dec. 25, 1877	821	249	12	1089
Molding apparatus	W. Aikin and W. W. Drummond	195,784	Oct. 2, 1877	89	26	12	574
Molding, Iron	J. Hursh	190,492	May 8, 1877	396	115	11	806
Molding-machine	J. S. Loomis	187,471	Feb. 20, 1877	569	176	11	297
Molding-machine	J. B. McCune	189,245	Apr. 3, 1877	214	72	11	587
Molding-machine	S. Sawyer	187,914	Feb. 27, 1877	1017	313	11	365
Molding-machine	A. W. Stossmeister	189,812	Apr. 17, 1877	815	252	11	681
Molding machine, Rope	C. Allen	197,446	Nov. 27, 1877	767	229	12	897
Molding machine, Sand	W. Aikin and W. W. Drummond	195,785	Oct. 2, 1877	90	26	12	574
Molding machine, Sand	W. Aikin and W. W. Drummond	195,786	Oct. 2, 1877	91	27	12	574
Molding, Match-plate	T. F. Hammer	193,508	July 24, 1877	989	299, 300	12	171
Molding-pipes	H. H. Fisher	185,906	Jan. 2, 1877	91	28	11	20
Molding plastic material, Die for	D. C. Lockwood	194,920	Sept. 4, 1877	161	51	12	422
Moldings, Hand-tool for working	J. H. Lewis	193,373	July 24, 1877	862	264	12	153
Moldings, Machine for cutting wood	M. Bostwick	192,858	July 10, 1877	329	97	12	65
Monetary paper, Preventing the alteration or counterfeiting of	W. A. Smith	193,299	July 17, 1877	772	237	12	132
Monkey-wrench	W. H. Glover	198,196	Dec. 18, 1877	514	159	12	1035
Monkey-wrench	J. W. Powers	187,773	Feb. 27, 1877	872	272	11	346
Monkey-wrench	A. A. Sanborn and C. Burroughs	195,173	Sept. 11, 1877	435	129	12	469
Monument	A. Smith	189,327	Apr. 10, 1877	330	105	11	609
Monument	A. Smith	191,290	May 29, 1877	1225	368	11	940
Monument	C. W. Wickham	197,069	Nov. 13, 1877	352	104	12	819
Monument and tomb combined	G. D. Schuyler	196,045	Oct. 9, 1877	368	105	12	621
Mop	E. S. Ellis	192,906	July 10, 1877	370	110	12	71
Mop-wringer	C. A. Libby	187,873	Feb. 27, 1877	972	302	11	359
Mordanting textile fabrics	H. D. Dupee	192,491	June 26, 1877	1023		11	1139
Mortising and tenoning machine	W. Levin	194,304	Aug. 21, 1877	546	165	12	321
Mortising-machine	H. Carter	191,109	May 22, 1877	1033	309	11	905

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Mortising-machine	S. Duck	197,111	Nov. 13, 1877	401	118	12	826
Mortising-machine	A. D. Eddy and H. J. Stolzenbach	191,947	June 12, 1877	427	132	11	1038
Mortising-machine	W. W. Green, jr.	194,869	Sept. 4, 1877	112	35	12	416
Mortising-machine	C. A. Weed	186,182	Jan. 9, 1877	365	112	11	65
Mosquito-bar	M. Petrie	194,927	Sept. 4, 1877	171	53	12	423
Mosquito-bar and clothes-drier combined	C. Sundquist	196,723	Oct. 30, 1877	1089	316	12	749
Mosquito net and canopy	A. R. Baker	188,275	Mar. 13, 1877	317	100	11	429
Mosquito-net canopy	U. W. Armstrong	196,322	Oct. 23, 1877	680	196	12	681
Mosquito-net frame	W. H. Arnold and N. Petersen	195,323	Sept. 18, 1877	594	174	12	499
Mosquito-net frame	E. S. Lathrop and L. Salvaterre	186,583	Jan. 23, 1877	786	242	11	139
Mosquito-net frame	G. C. Mathers	197,483	Nov. 27, 1877	801	239	12	902
Mosquito-net frame	E. D. Metz and M. Mäder	198,465	Dec. 25, 1877	795	241	12	1086
Mosquito-net frame	J. F. Volle	189,287	Apr. 3, 1877	259	86	11	592
Mosquitoes, Device for killing	E. B. Johnston	187,016	Feb. 6, 1877	99	33	11	215
Moth-exterminator	J. R. Stephens	188,434	Mar. 13, 1877	477	147	11	450
Moth-trap	R. McInturff	186,430	Jan. 23, 1877	641	196	11	120
Motion, Converting	J. Smith	190,917	May 15, 1877	826	245	11	870
Motion, Converting reciprocating into rotary	C. Chadwick	191,654	June 5, 1877	136	42	11	994
Motion, Converting reciprocating into rotary	C. Chadwick	191,655	June 5, 1877	137	43	11	994
Motion, Device for converting	E. Long and L. E. Lyon	190,601	May 8, 1877	500	149	11	820
Motion, Device for converting	J. Tascher	193,197	July 17, 1877	655	200	12	117
Motion, Device for transmitting	W. Adriance	194,211	Aug. 14, 1877	439	133	12	300
Motion, Device for transmitting	P. Derkum	192,155	June 19, 1877	663	203	11	1080
Motion, Friction device for controlling	A. K. Rider	192,012	June 12, 1877	494	151, 152	11	1046
Motive power	R. D. Green	191,955	June 12, 1877	436	134, 135	11	1039
Motive power	J. Gross	187,845	Feb. 27, 1877	950	295	11	356
Motive power	S. Mellina	192,180	June 19, 1877	684	209	11	1083
Motor: *See* Electric motor. Electro-magnetic motor. Hydraulic motor. Machinery-motor. Sewing-machine motor. Spring-motor. Weight-motor.							
Motor	E. E. G. Bozérian	197,759	Dec. 4, 1877	57	18	12	954
Motor	G. E. E. Bozérian	191,508	May 29, 1877	1437	433	11	966
Motor	J. C. Butler	190,818	May 15, 1877	734	217	11	858
Motor	E. Pepple	188,304	Mar. 13, 1877	345	108, 109	11	432
Motor	P. F. Joute and C. F. Bernard	198,461	Dec. 25, 1877	790	240	12	1085
Motor	E. McCaffrey	188,529	Mar. 20, 1877	579	179	11	473
Motor	T. H. Smythe	193,675	July 31, 1877	1185	354	12	207
Motor	G. W. Wilson	198,480	Dec. 25, 1877	810	246	12	1087
Motor-spring	C. H. Slicer	187,424	Feb. 13, 1877	503	156	11	282
Mousing-hook	A. W. Chilcott	186,988	Feb. 6, 1877	76	26	11	212
Mower	J. H. Cain	191,025	May 22, 1877	957	284	11	894
Mower	R. Dirks	190,962	May 22, 1877	892	264	11	886
Mower	G. B. Douglas and L. C. Wemple	189,709	Apr. 17, 1877	711	219	11	667
Mower	W. W. Edgarton	193,697	July 31, 1877	1203	360	12	210
Mower	E. L. Gilman	190,025	Apr. 24, 1877	1058	322	11	720
Mower	W. F. Goodwin	198,604	Dec. 25, 1877	922	281, 282	12	1105
Mower	I. N. Hall	193,160	July 17, 1877	622	189	12	113
Mower	H. L. Hopkins	193,250	July 17, 1877	717	220	12	125
Mower	C. Lindborn	193,881	Aug. 7, 1877	75	24	12	245
Mower	M. F. Lowth	187,542	Feb. 20, 1877	631	196	11	306
Mower	A. R. Reese	192,627	July 3, 1877	73	21	12	22
Mower	J. F. Steward	197,500	Nov. 27, 1877	822	245	12	905
Mower	W. S. Stone	187,493	Feb. 20, 1877	588	182	11	300
Mower	R. D. Thomson	195,907	Oct. 9, 1877	226	64	12	601
Mower	W. N. Whiteley	197,916	Dec. 4, 1877	211	63, 64, 65	12	976
Mower	W. N. Whiteley	191,016	May 22, 1877	948	280, 281, 282	11	893
Mower and reaper knife grinding-machine	E. J. Worcester and V. F. Preutice.	193,437	July 24, 1877	920	280	12	161
Mower and reaper knife sharpener	Z. Frost	192,427	June 26, 1877	963	289	11	1132
Mower attachment, Lawn	A. H. Wood	190,994	May 22, 1877	926	274	11	890
Mower cutters, Machine for grinding lawn	E. J. Worcester	197,711	Nov. 27, 1877	1048	314	12	936
Mower, Lawn	J. Braun	195,336	Sept. 18, 1877	606	178	12	501
Mower, Lawn	T. Coldwell	187,818	Feb. 27, 1877	922	286	11	353
Mower, Lawn	W. C. Farnum	188,788	Mar. 27, 1877	847	257	11	518
Mower, Lawn	T. D. Marsh	196,241	Oct. 16, 1877	585	169	12	659
Mower, Lawn	H. Otto	186,948	Feb. 6, 1877	34	13	11	206
Mower, Lawn	E. P. Terrell	198,708	Dec. 25, 1877	1027	312	12	1119
Mowing-machine	H. L. Hopkins	193,448	July 24, 1877	932	283	12	163
Mowing-machine	M. G. Hubbard	188,367	Mar. 13, 1877	411	128	11	442
Mowing-machine	M. F. Lowth, T. J. Howe, and H. N. Labare.	196,238	Oct. 16, 1877	581	168	12	658
Mowing-machine	A. Stevens	187,737	Feb. 27, 1877	840	261	11	342
Mowing-machine	M. L. Wood	197,921	Dec. 4, 1877	217	67	12	977
Mucilage-bottle	F. Sholes	196,049	Oct. 9, 1877	372	106	12	621
Mucilage-bottle stopper	J. Tilghman	191,386	May 29, 1877	1299	394	11	950
Mucilage-holder	J. V. Browne	191,751	June 12, 1877	235	74	11	1013
Mucilage-holder	S. S. Newton	188,659	Mar. 20, 1877	704	216	11	490
Mucilage-holder	G. R. Wight	194,632	Aug. 28, 1877	869	259	12	374
Mucilage-holder stopper	S. S. Newton	193,023	July 10, 1877	477	144	12	86
Mucilage-holder stopper	S. S. Newton	193,024	July 10, 1877	477	144	12	86
Mucilage-holder stopper	S. S. Newton	193,025	July 10, 1877	479	145	12	86
Muffler, Ear	C. Greenwood	188,292	Mar. 13, 1877	334	105	11	431
Music, Apparatus for setting up	H. Goodwin	195,924	Oct. 9, 1877	243	69	12	603

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Music-leaf retainer for pianos	J. P. Molitor	192,591	July 3, 1877	35	11	12	17
Music-playing apparatus, Electro-pneumatic	W. F. and H. Schmoele, jr.	189,391	Apr. 10, 1877	384	123	11	617
Music-stand	J. D. and C. E. Alvord	189,544	Apr. 17, 1877	549	171	11	647
Music-support	E. A. Marsh	194,698	Aug. 28, 1877	931	277	12	383
Musical instrument	M. H. Collins	191,029	May 22, 1877	960	285	11	895
Musical instrument, Automatic	H. B. Horton	196,529	Oct. 30, 1877	902	261	12	723
Musical instrument, Automatic	E. P. Needham	197,048	Nov. 13, 1877	331	98	12	816
Musical instrument, Reed	W. Spethmann	193,192	July 17, 1877	651	198	12	117
Musical-instrument sound-board	W. Courtenay	197,252	Nov. 20, 1877	558	164	12	856
Musical instruments, Attachment for key-board	B. Bishop	186,298	Jan. 16, 1877	475	146	11	87
Musical instruments, Attachment for key-board	G. N. Carozzi	189,548	Apr. 17, 1877	553	172	11	647
Musical instruments, Mouth-piece for	C. G. Conn	190,558	May 8, 1877	458	136	11	814
Musical instruments, Sheet for automatic	P. B. Hoyt	187,860	Feb. 27, 1877	962	299	11	358
Mustache-guard	A. Furniss	197,028	Nov. 13, 1877	310	92	12	813
Muzzle-bit, Horse	A. J. Short	186,371	Jan. 16, 1877	568	172	11	98
Muzzle, Calf	H. W. Fuller	194,594	Aug. 28, 1877	838	249	12	370
Muzzle, Calf	G. Tilton	196,058	Oct. 9, 1877	382	109	12	623
N.							
Nail: *See* Horseshoe-nail. Shoe-nail. Picture-nail.							
Nail-assorter	S. M. and C. B. Howard	196,456	Oct. 23, 1877	803	231	12	699
Nail-assorting machine	H. B. Chess	185,894	Jan. 2, 1877	80	24	11	18
Nail-cutting machine	W. N. Severance	191,477	May 29, 1877	1392	420	11	962
Nail-driving machinery	J. E. Kimball	195,022	Sept. 11, 1877	277	84, 85	12	446
Nail feeding and driving machine	B. F. Bergh	196,108	Oct. 16, 1877	448	131	12	640
Nail machine, Cut	J. A. Bidwell	196,869	Nov. 6, 1877	134	40, 41, 42	12	780
Nail machine, Cut	R. M. Cummings	192,237	June 19, 1877	746	228	11	1092
Nail machines, Feeding mechanism for cut	B. F. Rice	190,251	May 1, 1877	133	40	11	764
Nail-plate feeder	W. H. Field	197,547	Nov. 27, 1877	872	259, 260	12	912
Nail-plate feeder	W. Koplin	189,236	Apr. 3, 1877	201	68, 69	11	586
Nail-plate feeder	A. Tyrell and S. Evans	193,577	July 24, 1877	1060	318	12	179
Nail-plate feeder	A. H. Tyrrell and S. Evans	196,513	Oct. 23, 1877	872	251	12	707
Nail-plate-feeding machine	E. J. Couch	193,926	Aug. 7, 1877	122	39	12	251
Nail-plates, Pile for	W. H. Powell	189,495	Apr. 10, 1877	483	153	11	629
Nails, Machine for notching wire in the manufacture of.	J. M. E. Baackes	193,910	Aug. 7, 1877	107	35	12	249
Nailing and pegging machine	G. McKay	188,810	Mar. 27, 1877	875	265	11	522
Nailing-machine	C. T. Brandon	195,696	Oct. 2, 1877	4	2	12	561
Nailing-machine	S. Harris, jr	197,269	Nov. 20, 1877	570	169	12	859
Nailing-machines, Feeding mechanism for	G. H. Perkins and J. Bozorth	192,278	June 19, 1877	791	240	11	1097
Napkin-holder	A. Barion	196,621	Oct. 30, 1877	984	287	12	735
Napkin-holder	E. C. Bickford	187,247	Feb. 13, 1877	330	106	11	259
Napkin-holder	F. W. Campbell	187,214	Feb. 13, 1877	298	97	11	255
Napkin-holder	M. Campbell	191,107	May 22, 1877	1032	308	11	905
Napkin-holder	R. W. Huston	191,148	May 22, 1877	1069	320	11	910
Napkin-holder	W. F. Lewis and R. T. Lattin	187,649	Feb. 20, 1877	736	227	11	320
Napkin-holder	E. Mears	195,831	Oct. 2, 1877	136	39	12	580
Napkin ring and holder	J. Annin	198,065	Dec. 11, 1877	358	111	12	1097
Napkin ring and holder	J. Heberling	196,665	Oct. 30, 1877	1032	300	12	741
Napkin ring and holder	J. Heberling	196,898	Nov. 6, 1877	169	49	12	784
Napkin-supporter	S. Houghton	194,040	Aug. 14, 1877	261	77	12	277
Neck-band	N. W. Caughy	190,003	Apr. 24, 1877	1034	315	11	717
Neck-tie	R. Swenarton	188,438	Mar. 13, 1877	482	149	11	451
Neck-tie clasp	A. H. Dodd	192,156	June 19, 1877	664	203	11	1081
Neck-tie holder	F. Hovey	187,858	Feb. 27, 1877	960	298	11	358
Neck-tie retainer	W. T. Buckner	190,001	Apr. 24, 1877	1033	315	11	717
Neck-tie retainer	L. Hussey	190,862	May 15, 1877	773	229	11	863
Neck-tie retainer	F. W. Koch	196,587	Oct. 30, 1877	958	278	12	731
Neck-tie sample-card	D. Richter	186,879	Jan. 30, 1877	1082	335	11	188
Needle-eyes, Machine for polishing	A. E. Payno and J. S. George	193,031	July 10, 1877	486	147	12	87
Needle-wrapper	G. H. Bleloch	197,592	Nov. 27, 1877	918	274	12	919
Net for horses, Fly	E. Crebs	195,488	Sept. 25, 1877	765	225	12	532
Net, Gill	D. W. and S. H. Davis	186,232	Jan. 16, 1877	420	129	11	80
Nigger-engine	C. Lamb	186,011	Jan. 9, 1877	203	61	11	44
Nippers and clincher, Blacksmith's	N. Brown	195,441	Sept. 25, 1877	718	212	12	526
Nippers, Car-ticket	J. Thomas	196,841	Nov. 6, 1877	103	32	12	775
Nipple, Teething	C. E. Rogers	190,908	May 15, 1877	818	241	11	869
Non-conducting platform or mat	H. L. Palmer	198,412	Dec. 18, 1877	729	221	12	1067
Noodle-machine	G. Fritz	185,910	Jan. 2, 1877	96	30	11	21
Nozzle and sprinkler combined	N. Malmquist	189,368	Apr. 10, 1877	363	117	11	614
Nozzle, Exhaust	T. Shaw	187,780	Feb. 27, 1877	882	275	11	348
Nursery-chair	L. I. Adams	191,294	May 29, 1877	1227	369	11	940
Nursery-chair	A. P. Freshman	198,491	Dec. 25, 1877	822	249	12	1089
Nursery-chair	A. B. Stevens	192,467	June 26, 1877	997	300	11	1137
Nursery-chair	J. C. Wheeler	190,800	May 15, 1877	716	212	11	855
Nursing apparatus	G. F. White	196,610	Oct. 30, 1877	976	284	12	734
Nursing-shield	J. W. Patch	196,594	Oct. 30, 1877	964	280	12	732
Nut and bolt lock	H. A. Harvey	197,467	Nov. 27, 1877	787	235	12	900
Nut-blank-bars, Machine for making hexagonal	C. H. Robinson	185,836	Jan. 2, 1877	22	7, 8	11	11
Nut, Covered	F. A. Bradley	192,859	July 10, 1877	329	97	12	65
Nut cracker and pick	S. Poole	198,678	Dec. 25, 1877	1000	304	12	1115
Nut-lock	A. W. Bodell	195,203	Sept. 18, 1877	476	141	12	483
Nut-lock	M. Bourke	197,087	Nov. 13, 1877	375	111	12	832
Nut-lock	A. Brown and A. G. Huey	190,736	May 15, 1877	663	197	11	848
Nut-lock	S. Caldwell	191,309	May 29, 1877	1239	372	11	942
Nut-lock	M. Calhoun	197,762	Dec. 4, 1877	59	19	12	951
Nut-lock	G. J. Carney	197,923	Dec. 11, 1877	225	69	12	987
Nut-lock	J. T. Collins and E. B. Grant	192,636	July 3, 1877	82	25	12	23
Nut-lock	J. and J. Collman, jr.	197,606	Nov. 27, 1877	931	277	12	921

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Nut-lock	S. S. Crocker and A. Wilcox	194,133	Aug. 14, 1877	372	11	12	290
Nut-lock	W. Dicks	186,926	Feb. 6, 1877	7	2	11	204
Nut-lock	J. W. Eaton	192,620	July 3, 1877	66	19	12	21
Nut-lock	W. C. Gould	186,421	Jan. 23, 1877	633	193	11	119
Nut-lock	M. Hahn and G. Mayers	191,139	May 22, 1877	1062	318	11	909
Nut-lock	W. C. Harner	190,583	May 8, 1877	481	144	11	817
Nut-lock	J. Hollingsworth	192,625	July 3, 1877	71	21	12	22
Nut-lock	A. Johnson	188,055	Mar. 6, 1877	97	29	11	393
Nut-lock	R. A. Kelly	195,513	Sept. 25, 1877	790	234	12	536
Nut-lock	J. D. Kennard	189,747	Apr. 17, 1877	755	231	11	672
Nut-lock	E. P. Landfear	185,936	Jan. 2, 1877	129	38	11	25
Nut-lock	W. Lyon	193,717	July 31, 1877	1218	365	12	212
Nut-lock	W. Lyon	195,516	Sept. 25, 1877	793	234	12	
Nut-lock	D. R. Major	195,379	Sept. 18, 1877	646	192	12	507
Nut-lock	J. A. McCray	190,885	May 15, 1877	795	235	11	866
Nut-lock	G. Neilson	189,642	Aug. 17, 1877	642	200	11	659
Nut-lock	J. A. Nichols	193,272	July 17, 1877	744	227	12	129
Nut-lock	E. Reese	198,521	Dec. 25, 1877	849	258	12	1093
Nut-lock	A. D. Rock	198,251	Dec. 18, 1877	584	177	12	1045
Nut-lock	E. R. Shepard	191,079	May 22, 1877	1004	299	11	901
Nut-lock	L. Sterne	185,979	Jan. 2, 1877	164	50	11	30
Nut-lock	H. C. Stouffer	187,679	Feb. 20, 1877	760	236	11	323
Nut-lock	F. Swingly	186,066	Jan. 9, 1877	256	77	11	51
Nut-lock	W. Tunstill	185,877	Jan. 2, 1877	62	19	11	16
Nut-lock	T. Vernon	189,075	Apr. 3, 1877	58	22	11	567
Nut-lock	J. J. Walden	193,789	July 31, 1877	1293	388	12	222
Nut-lock	F. L. Williams	190,398	May 1, 1877	287	84	11	783
Nut-lock	J. J. Winsor	195,912	Oct. 9, 1877	232	66	12	602
Nut-lock	A. Woodward	197,920	Dec. 4, 1877	216	66	12	976
Nut-lock	J. C. Wright	189,984	Apr. 24, 1877	1006	308	11	714
Nut-lock and washer	E. A. Mercer and J. D. C. Pownall	190,443	May 8, 1877	345	101	11	800
Nut-lock and washer for bolts	D. Cumming	196,113	Oct. 16, 1877	455	133	12	641
Nut-machine	J. R. Blakeslee	193,215	July 17, 1877	677	206	12	120
Nut-machine	J. Johnston	194,246	Aug. 14, 1877	475	143	12	305
Nut-making machine	S. S. Townsend	191,200	May 22, 1877	1117	{334 335	{11	917
Nut-tapping machine	W. Crighton	187,458	Feb. 20, 1877	555	172	11	296
Nut-tapping machine	S. L. Worsley	195,321	Sept. 18, 1877	592	174	12	499
O.							
Oakum, Machine for making	D. S. Tibbals	196,059	Oct. 9, 1877	382	109	12	623
Oakum, Making	C. M. Winter	195,684	Sept. 25, 1877	948		12	558
Oar	J. W. Wall	195,778	Oct. 2, 1877	81	25	12	573
Oar-blades, Protection-tip for	M. Britton	191,923	June 12, 1877	401	125	11	1034
Oatmeal-cutter	H. Z. Coles	198,571	Dec. 25, 1877	891	272	12	1100
Odorless air-closet	G. R. Moore	186,266	Jan. 16, 1877	450	138	11	84
Odorless receptacle	G. R. Moore	186,265	Jan. 16, 1877	449	138	11	83
Office-indicator	J. R. Cluxton	190,282	May 1, 1877	169	50	11	768
Oil and filter cup	A. J. Stevens	191,380	May 29, 1877	1295	392	11	950
Oil-cabinet	J. S. Gold	194,596	Aug. 28, 1877	839	250	12	370
Oil-cabinet	J. A. Wright	188,560	Mar. 20, 1877	605	187	11	478
Oil-can	W. H. Bartels	189,682	Apr. 17, 1877	687	212	11	664
Oil-can	W. H. Bartels	193,212	July 17, 1877	675	206	12	120
Oil-can	D. Bennett	191,642	June 5, 1877	124	38	11	993
Oil-can	J. F. Coppel	192,486	June 26, 1877	1014	307	11	1139
Oil-can	J. Fleming	193,114	July 17, 1877	586	177	12	107
Oil-can	J. Graves	191,047	May 22, 1877	976	296	11	897
Oil can	W. Y. Horne	194,820	Sept. 4, 1877	66	22	12	409
Oil-can	T. W. McNally	193,017	July 10, 1877	472	143	12	85
Oil-can	F. Schelling	197,947	Dec. 11, 1877	246	76	12	990
Oil-can and package for carrying fluids	G. T. Hunsaker	192,581	July 3, 1877	27	8	12	16
Oil-can, Measuring	A. E. Anderson	187,580	Feb. 20, 1877	665	207	11	311
Oil-can spout	H. C. Campbell	191,000	May 22, 1877	931	275	11	891
Oil-can, &c., stopper	A. Berdan	188,094	Mar. 6, 1877	127	38	11	398
Oil compound, Lubricating	E. E. Hendrick	197,129	Nov. 13, 1877	417		12	828
Oil, grease, &c., Process and apparatus for cleansing and purifying.	R. D. Turner	194,275	Aug. 14, 1877	504	153	12	308
Oil-press	S. P. Hedges	197,218	Nov. 20, 1877	525	155	12	852
Oil-stone holder	G. W. Dudley	189,089	Apr. 3, 1877	69	25	11	568
Oil-tank	T. Shaw	194,847	Sept. 4, 1877	89	29	12	413
Oil-tank, Self-measuring	E. A. Smead	196,394	Oct. 23, 1877	750	216	12	691
Oil to buildings, Apparatus for supplying hydrocarbon.	J. S. Hull	196,360	Oct. 23, 1877	716	206	12	686
Oil to water under pressure, Apparatus for supplying hydrocarbon.	W. Major	190,603	May 8, 1877	502	149	11	820
Oils, Apparatus and process for the separation and treatment of.	H. Frasch	190,483	May 8, 1877	388	113	11	805
Oils, Bleaching and improving cotton-seed	R. Macdonald	189,867	Apr. 24, 1877	893		11	699
Oiler	J. H. Bertram	186,658	Jan. 30, 1877	863	267	11	159
Oiler	D. H. Chamberlain	195,340	Sept. 18, 1877	610	179	12	502
Oiler	W. H. Harrison	188,049	Mar. 6, 1877	93	27	11	393
Oiler	S. S. Newton	186,364	Jan. 16, 1877	559	170	11	97
Oiler-nozzle	S. S. Newton	188,658	Mar. 20, 1877	703	216	11	490
Oiler, Pocket	C. J. Hauck	193,760	July 31, 1877	1260	378	12	218
Oiling journals of loose pulleys	C. H. Weigle	194,199	Aug. 14, 1877	431	130	12	299
Oiling spindles in spinning-frames, Device for	L. Coburn	194,765	Sept. 4, 1877	7	2	12	402
Oiling windmills, Device for	I. H. Palmer	195,157	Sept. 11, 1877	417	123	12	466
Opera-chair	C. B. Demarest	197,723	Dec. 4, 1877	16	5	12	948
Opera-chair	P. W. Nolan	196,036	Oct. 9, 1877	359	103	12	620
Opera-chair	R. H. Ormsby	191,774	June 12, 1877	255	80	11	1016
Opera-glasses	J. A. Finch	198,195	Dec. 18, 1877	513	158	12	1035
Optical illusions, Apparatus for producing	C. W. and O. McGlennen	187,884	Feb. 27, 1877	985	305	11	361
Optometer	G. Johnston and L. Conrath	195,135	Sept. 11, 1877	393	118	11	463

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
				Spec.	Dr'g.	Vol.	Page.
Ordnance	S. Crispin	186,308	Jan. 16, 1877	486	149	11	89
Ordnance, Breech-loading	W. Palliser	197,168	Nov. 13, 1877	457	134, 135	12	834
Ordnance, Breech-loading	A. Schroeder	193 042	July 10, 1877	500	150	12	88
Ordnance, Breech-loading	F. M. Swallow	189,329	Apr. 10, 1877	331	105	11	609
Ordnance, Compound	W. Palliser	196,695	Oct. 30, 1877	1060	308	12	745
Ordnance, Vent-stopper for	P. B. Lawson	196,682	Oct. 30, 1877	1048	304	12	743
Ore and coal jigger	G. Schmauch	186,370	Jan. 16, 1877	567	172	11	97
Ore, Apparatus for crushing, grinding, and separating.	W. Hooper	190,326	May 1, 1877	208	62	11	773
Ore-concentrator	T. M. Healey and C. W. Rogers	194,965	Sept. 11, 1877	219	68	12	438
Ore-crusher	T. A. Blake	198,561	Dec. 25, 1877	884	269	12	1098
Ore-crusher	P. W. Gates	196,082	Oct. 16, 1877	415	120, 121	12	636
Ore-crusher	R. Lanyon	197,643	Nov. 27, 1877	969	288, 289	12	926
Ore-grinding machine	H. Trumbull	190,389	May 1, 1877	275	81	11	782
Ore-jigger	S. Stutz	194,059	Aug. 14, 1877	278	83	12	279
Ore-jigger	S. Stutz	194,060	Aug. 14, 1877	279	83	12	279
Ore-mill	H. K. Drake	192,747	July 3, 1877	186	54	12	38
Ore-mill	H. K. Drake	197,349	Nov. 20, 1877	655	194	12	872
Ore-mill for wet grinding	F. Rudeloff	194,468	Aug. 21, 1877	715	213	12	343
Ore, Reducing nickel	W. B. Tatro	191,728	June 5, 1877	202		11	1004
Ore-roaster, Revolving	J. Howell	190,217	May 1, 1877	103	30	11	760
Ore-roasting	W. L. Imlay	197,855	Dec. 4, 1877	147	45	12	967
Ore-roasting	I. M. Phelps	198,413	Dec. 18, 1877	731	221	12	1067
Ore roasting and smelting furnace	G. W. Cheney and D. C. Butterfield.	198,079	Dec. 11, 1877	370	115, 116	12	1009
Ore-roasting apparatus	A. B. Crosby	195,581	Sept. 25, 1877	850	252, 253	12	544
Ore-roasting furnace	W. K. Aldersley	185,882	Jan. 2, 1877	66	21	11	17
Ore-roasting furnace	E. G. Hall	198,016	Dec. 11, 1877	315	97	12	1000
Ore-roasting furnace	H. G. Livermore	191,351	May 29, 1877	1272	384	11	946
Ore-roasting furnace	W. J. Taylor	196,056	Oct. 9, 1877	377	107, 108	12	622
Ore-separator	W. M. Courtis	187,821	Feb. 27, 1877	924	287	11	353
Ore-separator	W. Hooper	189,734	Apr. 17, 1877	739	227, 228	11	671
Ore-separator	J. Richards	192,191	June 19, 1877	696	213	11	1085
Ore-separator	S. Stutz	198,432	Dec. 18, 1877	749	226	12	1070
Ore-separator, Magnetic	A. Work	194,797	Sept. 4, 1877	42	14	12	406
Ore separator, Wet	W. Hooper	190,323	May 1, 1877	205	61, 62	11	773
Ore-separators, Dust-trap for	W. Hooper	196,455	Oct. 23, 1877	802	231	12	698
Ore sluice and concentrator	G. R. Evans	189,928	Apr. 24, 1877	954	292	11	708
Ore-washer	D. Beaumont	190,808	May 15, 1877	722	214	11	856
Ore-washer	J. S. Duncan	194,810	Sept. 4, 1877	55	18	12	408
Ore-washer	W. B Frue and W. McDermot	196,651	Oct. 30, 1877	1022	297	12	740
O e-washer	D. D. Hendrick	190,585	May 8, 1877	483	144	11	817
Ore-washer	J. Richards	191,370	May 29, 1877	1286	389	11	948
Ore-washer	H. E. Taylor	189,882	Apr. 24, 1877	912	278	11	702
Ore washing and amalgamating machine	J. H. Wilhelm	196,174	Oct. 16, 1877	513	149, 150	12	649
Ores, Apparatus for classifying and concentrating	G. M. Rice, 2d	197,897	Dec. 4, 1877	190	58	12	973
Ores, Chlorinating	J. H. Mears	195,381	Sept. 18, 1877	648		12	507
Ores for roasting, Preparing telluride	Z. A. Willard	186,655	Jan. 23, 1877	853		11	148
Ores, Process and apparatus for amalgamating	M. Laflin and S. Elliott	189,313	Apr. 10, 1877	313	99	11	607
Ores, Process and apparatus for leaching	A. B. Crosby	197,106	Nov. 13, 1877	396	116	12	825
Ores, Process and apparatus for treating	Z. A. Willard	186,654	Jan. 23, 1877	851	263	11	148
Ores, Riffle-box for concentrating	W. H. Stanley	187,193	Feb. 6, 1877	256	84	11	237
Ores, Tossing-tub for separating	W. Hooper	185,921	Jan. 2, 1877	111	33	11	22
Ores, Treating	G. D. Wyckoff	186,222	Jan. 16, 1877	412		11	79
Organ-action	J. A. Smith	196,490	Oct. 23, 1877	844	243	12	703
Organ action, Reed	L. K. Fuller	189,554	Apr. 17, 1877	558	174	11	648
Organ action, Reed	R. E. Letton	190,228	May 1, 1877	112	33	11	761
Organ action, Reed	G. Woods	190,698	May 15, 1877	622	185	11	843
Organ-bellows valve	A. K. Hebard	197,031	Nov. 13, 1877	312	93	12	813
Organ-case	L. K. Fuller	190,843	May 15, 1877	755	224	11	861
Organ, &c., coupler	R. E. Letton	190,687	May 15, 1877	612	182	11	841
Organ coupler, Reed	G. B. Kelly and O. H. Arno	186,846	Jan. 30, 1877	1051	324	11	183
Organ, Pipe	C. Fogelberg	187,261	Feb. 13, 1877	343	109	11	261
Organ-pipe	C. Fogelberg	192,061	June 19, 1877	569	172	11	1068
Organ, Reed	L. K. Fuller	189,555	Apr. 17, 1877	560	174	11	648
Organ, Reed	G. B. Kelly	186,845	Jan. 30, 1877	1050	324	11	183
Organ, Reed	G. B. Kelly and E. L. Rand	186,849	Jan. 30, 1877	1054	325	11	184
Organ, Reed	A. R. Koerber and J. Sheridan	192,583	July 3, 1877	29	9	12	16
Organ, Reed	M. J. Matthews	196,984	Nov. 13, 1877	266	78	12	806
Organ-reed	J. Pim	195,394	Sept. 18, 1877	660	195	12	509
Organ, Reed	A. F. Severance	196,312	Oct. 23, 1877	671	194	12	679
Organ reed-pipe	W. A. Johnson	191,973	June 12, 1877	454	141	11	1041
Organ stop-action	N. M. Boynton	197,203	Nov. 20, 1877	510	150	12	849
Organ stop-action	A. Trowbridge, jr	194,017	Aug. 7, 1877	219	65	12	264
Organ stop-action, Reed	G. B. Kelly and E. L. Rand	186,848	Jan. 30, 1877	1052	325	11	184
Organ stop-action, Reed	G. B. Kelly	186,847	Jan. 30, 1877	1051	324	11	183
Organ stop-action, Reed	W. D. Parker	186,610	Jan. 23, 1877	810	250	11	142
Organ stop-action, Reed	H. H. Winger	195,469	Sept. 25, 1877	747	220	12	529
Organ stop-knob	W. H. Currier	188,860	Mar. 27, 1877	921	280	11	528
Organ swell, Reed	G. B. Kelly and A. K. Hebard	191,532	June 5, 1877	25	7, 8	11	979
Organs, Octave and manual coupler for	W. D. Parker	188,175	Mar. 6, 1877	207	64	11	408
Ornamental fabrics, Manufacture of	P. A. Dailey	198,358	Dec. 18, 1877	675	206	12	1059
Ornamentation of the surfaces of hard material	J. F. Boynton	197,088	Nov. 13, 1877	376		12	822
Ornamenting metallic articles	F. W. Mix	197,787	Dec. 4, 1877	84	26	12	957
Ornamenting wooden surfaces	O. Bärwolff	192,558	July 3, 1877	2	1	12	13
Orthographic and numerical frame	H. O. Harden	198,018	Dec. 11, 1877	317	98	12	1001
Oscillating chair	E. E. Fisher	196,208	Oct. 16, 1877	548	159	12	654

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Oscillating chair	H. Geise	189,933	Apr. 24, 1877	960	293	11	708
Oscillating register	N. M. Lowe	195,031	Sept. 11, 1877	285	87	12	447
Oscillating steam-engine	S. Gibson and D. C. Eberhart	191,134	May 22, 1877	1058	316	11	908
Oven	A. Crumbie	188,600	Mar. 20, 1877	642	198	11	423
Oven and oven-door	W. C. Davis	191,119	May 22, 1877	1041	312	11	906
Oven, Baker's	A. Wilson	187,209	Feb. 6, 1877	269	88	11	239
Oven, Baker's	A. Wilson and A. O. Ablenius	193,360	July 24, 1877	849	260	12	151
Oven, Baking	S. Axford	195,249	Sept. 18, 1877	529	154	12	490
Oven-illuminating apparatus	H. A. Stadler	190,637	May 8, 1877	542	161	11	825
Oven or tunnel for drying bricks, &c	J. K. Caldwell	198,347	Dec. 18, 1877	663	202	12	1057
Oven, Portable	E. B. Van De Mark	189,403	Apr. 10, 1877	399	126	11	618
Oven-rack	J. F. Houghton	189,937	Apr. 24, 1877	963	294	11	709
Oven, Tile	F. W. Brunnert	187,999	Mar. 6, 1877	43	11	11	386
Ovens by steam, Heating	A. M. Farnham	197,462	Nov. 27, 1877	783	233	12	899
Over-bosom	H. C. Holmes	188,015	Mar. 6, 1877	57	17	11	388
Over-gaiter	W. W. Whitcomb and J. C. Daggett.	197,002	Nov. 13, 1877	283	83, 84	12	808
Overalls	L. Aronson	196,856	Nov. 6, 1877	122	37	12	778
Overalls	H. S. Flood	198,287	Dec. 18, 1877	614	186	12	1050
Overalls	G. C. Henning	198,299	Dec. 18, 1877	622	189	12	1051
Overalls	S. Kauffmann	195,894	Oct. 9, 1877	214	60	12	599
Overalls	C. B. Moulton	187,767	Feb. 27, 1877	864	269	11	345
Overalls	D. Neustadter	196,693	Oct. 30, 1877	1058	307	12	745
Overalls	J. Wallach	193,199	July 17, 1877	657	201	12	118
Overalls and jumper combined	S. H. Emanuel	193,149	July 17, 1877	613	186	12	111
Overalls and jumper combined	S. H. Emanuel	196,571	Oct. 30, 1877	944	273	12	729
Over-shoe	G. Watkinson	195,316	Sept. 18, 1877	589	173	12	499
Ox-bow fastener	P. Webb	192,205	June 19, 1877	708	217	11	1087
Oxide, Producing artificial cold by means of anhydrous sulphurons.	R. P. Pictet	187,413	Feb. 13, 1877	492	153	11	280
Oyster-dredging machinery	W. T. Crandell and H. F. Ward	197,341	Nov. 20, 1877	649	191	12	870
Oyster-opening machine	T. W. Temple	189,966	Apr. 24, 1877	989	302	11	712
Oysters, Implement for opening	T. W. Temple	191,384	May 29, 1877	1298	393	11	950
Ozokerite, Refining crude	C. M. Pielsticker	186,951	Feb. 6, 1877	37		11	207
Ozone-generator	H. Spendelow	193,386	July 24, 1877	874	267	12	154
Ozone-machine	A. W. Sangster	194,729	Aug. 28, 1877	660	285	12	387
P.							
Package-holder	E. Card and I. Lindsley	194,578	Aug. 28, 1877	825	245	12	367
Package-holder or carrier	J. H. Randall	192,388	June 26, 1877	931	279	11	1127
Packer for petroleum-wells	L. Stewart	187,990	Mar. 6, 1877	34	9	11	385
Packing-box, Sectional	G. Robinson, jr	194,844	Sept. 4, 1877	87	29	12	413
Packing-case	J. I. Berry	196,866	Nov. 6, 1877	131	40	12	779
Packing-case	W. Carter	191,831	June 12, 1877	318	98	11	1023
Packing, Device for adjusting piston	J. Varon	195,546	Sept. 25, 1877	816	242	12	540
Packing for blower cylinders, Piston	T. H. Bourke	196,627	Oct. 30, 1877	993	289	12	736
Packing for combining-tubes of injectors of steam-boilers.	J. B. Harkins	195,007	Sept. 11, 1877	259	79	12	443
Packing for hydraulic cylinders	C. E. Boardman	188,496	Mar. 20, 1877	549	169	11	469
Packing for man-holes, hand-holes, &c	A. Powell	188,480	Mar. 20, 1877	535	164	11	467
Packing for oil-well pump-valves, Metallic	T. B. Kelley	187,762	Feb. 27, 1877	860	268	11	345
Packing for oil-wells, Water	J. P. and S. H. Gordon	196,220	Oct. 16, 1877	559	162	12	655
Packing for piston-rods, &c	E. Holt	196,119	Oct. 16, 1877	463	135	12	642
Packing for piston-rods, &c	C. T. Sleeper	191,891	June 12, 1877	371	114	11	1030
Packing for rotary engines	E. C. Johnson	191,434	May 29, 1877	1347	408	11	956
Packing for steam engines and pumps, Steam	J. W. Hawkins	188,798	Mar. 27, 1877	859	261	11	520
Packing for steam-engines, Piston	W. Rankin	189,140	Apr. 3, 1877	110	39, 40	11	574
Packing, Machine for making asbestus	H. W. Guest	189,893	Apr. 24, 1877	924	281	11	703
Packing, Machine for making piston	P. W. Richards	188,952	Mar. 27, 1877	1008	309	11	541
Packing, Mill-spindle	E. and D. Moore	187,663	Feb. 20, 1877	746	231	11	321
Packing or shipping can	H. A. Sherwin	194,564	Aug. 28, 1877	812	242	12	366
Packing, Piston	I. H. Congdon	194,583	Aug. 28, 1877	829	246	12	368
Packing, Piston	J. H. F. Otto	195,771	Oct. 2, 1877	76	23	12	572
Packing, Piston	P. W. Richards	187,985	Mar. 6, 1877	30	8	11	384
Packing, Piston	H. Walker	194,746	Aug. 28, 1877	982	291	12	389
Packing, Piston-rod	J. Byers	193,318	July 24, 1877	810	249	11	146
Packing, Piston-rod	J. C. Stead	188,433	Mar. 13, 1877	476	147	11	450
Packing, Piston-rod	F. D. Toucey and E. F. Scallen	195,421	Sept. 18, 1877	684	203	12	513
Pad: *See* Collar-pad. Copying-press pad. Moistening-pad. Saddle-pad.							
Paddle-wheel	H. Marcotte	196,813	Nov. 6, 1877	76	23	12	771
Paddle-wheel	D. B. Rich	197,292	Nov. 20, 1877	595	176	12	862
Paddle-wheel, Feathering	I. A. and E. E. Kilmer	192,921	July 10, 1877	384	114	12	72
Paddle-wheel, Feathering	D. Lindsay	193,008	July 10, 1877	462	140	12	84
Paddle-wheel, Feathering	W. C. Thompson	186,639	Jan. 23, 1877	837	259	11	146
Paddle-wheel, Feathering	W. Webster	187,436	Feb. 13, 1877	519	160	11	284
Paddle-wheel, Feathering	H. Williams	189,164	Apr. 3, 1877	130	47	11	577
Padlock	A. Delkescamp	188,781	Mar. 27, 1877	842	255	11	517
Padlock	J. Gerard	195,000	Sept. 11, 1877	253	77	12	443
Padlock	F. W. Smith and F. Egge	194,848	Sept. 4, 1877	90	29	12	413
Padlock	W. H. Taylor	192,847	July 10, 1877	319	94	12	64
Padlock	R. Thompson	191,195	May 22, 1877	1111	332	11	916
Padlock	J. J. Turner	197,911	Dec. 4, 1877	205	62	12	975
Padlock	J. J. Turner	198,713	Dec. 25, 1877	1032	314	12	1120
Padlock-case	F. W. Smith and F. Egge	194,849	Sept. 4, 1877	92	30	12	413
Padlock, Combination	T. Fox	198,595	Dec. 25, 1877	913	279	12	1103
Padlock, Combination	W. R. Young	197,582	Nov. 27, 1877	906	270	12	917
Padlock, Permutation	T. Fox	198,596	Dec. 25, 1877	914	279	12	1103
Padlock, Permutation	G. Hamilton	196,224	Oct. 16, 1877	564	163	12	656
Pail	P. Hickey	193,247	July 17, 1877	715	219	12	125
Pail and can	H. H. and D. H. Roe	185,837	Jan. 2, 1877	23	8	11	12
Pail and lantern, Dinner	J. Haight	198,294	Dec. 18, 1877	620	187	12	1050

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Pail-bottoms and barrel-heads, Machine for making.	G. W. Parker	192,385	June 26, 1877	926	278	11	1127
Pail, Lunch	T. N. Russell	195,050	Sept. 11, 1877	307	93	12	450
Pail, Milk	H. Dodge	197,836	Dec. 4, 1877	131	39	12	964
Pail, Milk	W. Hnermann	195,507	Sept. 25, 1877	786	232	12	535
Pail, Milk	J. D. Lathrop	195,138	Sept. 11, 1877	395	119	11	463
Pail, Scrubbing	F. N. Burk	194,783	Nov. 6, 1877	46	14	12	767
Pail, Strainer	W. H. Thrift	190,170	May 1, 1877	62	17	11	754
Paint	D. E. Breinig	193,636	July 31, 1877	1139		12	201
Paint	W. P. Jenney	190,761	May 15, 1877	684		11	851
Paint-can	E. Norton	188,026	Mar. 6, 1877	69	20	11	389
Paint composition	C. Brown	190,953	May 22, 1877	884		11	885
Paint composition	J. Fetzer	190,301	May 1, 1877	185		11	770
Paint composition	S. B. Fisher	189,091	Apr. 3, 1877	71		11	568
Paint-mill	J. F. Walter, jr	187,788	Feb. 27, 1877	890	277	11	349
Paint, Mixed	W. Longman	193,974	Aug. 7, 1877	176		12	258
Paint-mixer	J. W. Masury	196,533	Oct. 30, 1877	906	262	12	723
Paint-mixing can, Air-tight	I. Banister	197,755	Dec. 4, 1877	53	17	12	953
Paint packing and shipping can	H. H. Hull	193,408	July 24, 1877	894	273	12	157
Paints and powders, Manufacture of metallic	D. D. Parmelee	187,303	Feb. 13, 1877	386	122, 123	11	367
Paints, &c., Composition vehicle for	H. C. Crowell	192,056	June 19, 1877	564		11	1068
Paints, Striping-tool for	L. Homann	194,912	Sept. 4, 1877	153	48	12	421
Painter's easel, Carriage	J. G. Hohenstein	186,676	Jan. 30, 1877	879	272	11	161
Painter's palette	W. F. White	193,904	Aug. 7, 1877	103	33	12	249
Painter's striping implement	L. Homann	194,039	Aug. 14, 1877	260	77	12	276
Painting laths, Machine for	W. Roberts	191,372	May 29, 1877	1288	389	11	949
Painting-machine	J. S. Mills	195,628	Sept. 25, 1877	894	266	12	551
Painting shutter-blinds, Clamp for use in	S. H. Date	194,657	Aug. 28, 1877	893	266	12	378
Pan: *See* Amalgamating-pan. Bake-pan. Baking-pan. Bed-pan. Dust-pan. Evaporating-pan. Knife-scouring pan. Milk-pan. Roasting and baking pan. Sap-boiling pan. Scale-pan. Sugar boiling and evaporating pan.							
Pan and basin	G. Wright	189,590	Apr. 17, 1877	599	185	11	653
Panel	G. W. Banker	187,502	Feb. 20, 1877	599	185	11	301
Paneled chair-seat	J. M. Waters	186,644	Jan. 23, 1877	842	260	11	147
Panier	M. Rosenstock	197,409	Nov. 20, 1877	714	213	12	881
Pantaloons	S. Dentsch	187,826	Feb. 27, 1877	929	288	11	354
Pantaloons	S. L. and L. M. Thompson	189,883	Apr. 24, 1877	913	279	11	702
Pantaloons	I. Zoellner	191,565	May 29, 1877	1434	432	11	965
Pantaloons, Apparatus for shaping	G. Franko	196,214	Oct. 16, 1877	554	161	12	655
Pantaloons, Apparatus for shaping	E. B. Viets	195,467	Sept. 25, 1877	745	220	12	529
Pantaloons-protector	F. G. Hoffmann	198,460	Dec. 25, 1877	789	240	12	1085
Pantaloons-protector	J. I. Howard and C. D. Hayward	185,923	Jan. 2, 1877	113	34	11	23
Pantograph	P. L. Page	197,885	Dec. 4, 1877	178	54	12	971
Pantograph	E. T. Pearl	191,253	May 29, 1877	1187	357	11	935
Pantograph	E. Ware	190,797	May 15, 1877	714	211	11	855
Pantograph	E. Ware	195,315	Sept. 18, 1877	588	172	12	498
Pantographic engraving-machine	W. S. Wight	197,507	Nov. 27, 1877	831	248	12	906
Paper and other material, Machine for cutting	G. L. Gaeger	186,133	Jan. 9, 1877	316	97	11	59
Paper bag	A. S. Dennison	189,342	Apr. 10, 1877	339	108	11	610
Paper bag	W. T. Jordan and P. Mequillet	186,009	Jan. 9, 1877	201	61	11	44
Paper bag	I. W. Pope	194,170	Aug. 14, 1877	407	122	12	295
Paper bag	C. E. Sawyer	198,218	Dec. 18, 1877	535	166	12	1039
Paper bag	A. L. Slager	188,823	Mar. 27, 1877	886	269	11	524
Paper-bag machine	A. S. Dennison	191,943	June 12, 1877	424	131	11	1037
Paper-bag machine	T. W. Grinter	188,794	Mar. 27, 1877	853	259, 260	11	519
Paper-bag machine	T. W. Grinter	195,501	Sept. 28, 1877	778	228, 229, 230	12	534
Paper-bag machine	S. L. King	188,378	Mar. 13, 1877	423	131, 132	11	443
Paper-bag machine	W. Liddell	186,092	Jan. 9, 1877	277	84, 85	11	54
Paper-bag machine	W. Liddell	197,870	Dec. 4, 1877	160	49	12	969
Paper-bag machine	C. A. Nixon	189,056	Apr. 3, 1877	42	14, 15	11	565
Paper-bag machine	J. P. Raymond	190,618	May 8, 1877	519	154, 155	11	823
Paper-bag machine	J. P. Raymond	190,619	May 8, 1877	523	155	11	823
Paper-bag machine	C. M. Richardson and J. S. Gibbs	188,953	Mar. 27, 1877	1009	310, 311	11	541
Paper-bag machine	R. H. Thayer	190,097	Apr. 24, 1877	1138	346	11	771
Pager bags, Device for securing and carrying	F. H. Melville	193,888	Aug. 7, 1877	89	28	12	247
Paper-barrel machine	F. N. Davis	189,024	Apr. 3, 1877	15	5	11	562
Paper-barrel machines, Roll for	N. Keely	195,218	Sept. 18, 1877	491	145	12	485
Paper barrels, Manufacture of	E. M. Slayton	191,618	June 5, 1877	100	31	11	990
Paper boards, Machine for lining	J. F. and M. Seiberling	198,469	Dec. 25, 1877	799	242	12	1086
Paper box	C. M. Arthur	190,803	May 15, 1877	717	213	11	855
Paper box	M. Backes	191,276	May 29, 1877	1210	363	11	938
Paper box	J. P. Buckingham	186,459	Jan. 23, 1877	672	205	11	124
Paper box	J. P. Buckingham	187,506	Feb. 20, 1877	602	187	11	302
Paper box	R. B. Davis	186,811	Jan. 30, 1877	1007	313	11	179
Paper box	G. A. Denison	193,932	Aug. 7, 1877	133	41	12	253
Paper box	R. H. Foster	186,242	Jan. 16, 1877	428	131	11	81
Paper box	A. Goldback	189,454	Apr. 10, 1877	445	140	11	624
Paper box	L. P. Heath	186,730	Jan. 30, 1877	927	288	11	168
Paper box	L. P. Heath	189,036	Apr. 3, 1877	25	8	11	562
Paper box	L. P. Heath	189,037	Apr. 3, 1877	25	8	11	562
Paper box	L. P. Heath	189,038	Apr. 3, 1877	26	9	11	562
Paper box	L. P. Heath	196,358	Oct. 23, 1877	714	205	12	685
Paper box	F. S. Moore	188,168	Mar. 6, 1877	201	62	11	407

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Paper box	E. Morgan	189,898	Apr. 24, 1877	928	283	11	704
Paper box	E. Morgan	189,899	Apr. 24, 1877	929	283	11	704
Paper box	B. Osborn	187,666	Feb. 20, 1877	750	232	11	321
Paper box	B. Osborn	187,895	Feb. 27, 1877	996	308	11	362
Paper box	P. B. Pickens	191,712	June 5, 1877	189	59	11	1002
Paper box	L. B. Plimpton	190,980	May 22, 1877	912	270	11	889
Paper box	L. B. Plimpton	190,981	May 22, 1877	913	270	11	889
Paper box	R. A. Rogers and H. L. R. Wolf	194,178	Aug. 14, 1877	414	124	12	296
Paper box	A. D. Schaeffer	192,530	June 26, 1877	1066	321	11	1145
Paper box	A. D. Schaeffer	195,904	Oct. 9, 1877	223	63	12	601
Paper box	H. H. Snow	187,060	Feb. 6, 1877	137	45	11	221
Paper box	W. H. Swilt	192,883	July 10, 1877	352	104	12	68
Paper box	C. F. Taylor	190,454	May 8, 1877	358	104	11	801
Paper box	J. F. Winchell	197,194	Nov. 13, 1877	481	143	12	838
Paper box	H. L. R. and O. Wolf	190,945	May 15, 1877	857	254	11	873
Paper box	H. L. R. Wolf	195,685	Sept. 25, 1877	948	283	12	558
Paper-box machine	E. B. Beecher	186,978	Feb. 6, 1877	62	21, 22, 23	11	210
Paper-box machine	J. P. Buckingham	194,289	Aug. 21, 1877	532	161	12	319
Paper, Building	H. F. Evans	195,593	Sept. 25, 1877	864	256	12	546
Paper-calendering machine	F. W. Bird	187,586	Feb. 20, 1877	671	208, 209	11	311
Paper cans for petroleum and other fluids, Making	E. Waters	193,387	July 24, 1877	875	267	12	154
Paper carpet	T. S. Scott	188,075	Mar. 6, 1877	112		11	396
Paper case or pocket	L. Hellman and G. Gregory	194,599	Aug. 28, 1877	842	251	12	370
Paper, circulars, &c., Gage for handling and distributing.	H. H. Hill	196,976	Nov. 13, 1877	256	76	12	805
Paper-clip	E. J. Wright	193,389	July 24, 1877	876	268	12	155
Paper, cloth, &c., Machine for cutting	E. Allen	186,190	Jan. 16, 1877	386	117	11	75
Paper collar	H. Averill and F. B. Ginn	186,517	Jan. 23, 1877	718	221	11	130
Paper collar	S. S. Gray	189,726	Apr. 17, 1877	728	224	11	670
Paper collar	E. E. Mack	191,354	May 29, 1877	1275	385	11	947
Paper-collar box	G. C. Thomas	194,567	Aug. 28, 1877	815	243	12	366
Paper-collar machine	C. Spofford	198,424	Dec. 18, 1877	741	224	12	1069
Paper cutting and winding machine	L. W. Pettebone	188,406	Mar. 13, 1877	451	140	11	447
Paper-cutting machine	W. F. Hill	195,278	Sept. 18, 1877	555	161	12	494
Paper-cutting machine	P. McAleer	186,262	Jan. 16, 1877	446	137	11	83
Paper-cutting machine	J. G. Morgan	198,519	Dec. 25, 1877	847	258	12	1093
Paper-cutting machine	E. R. and T. W. Sheridan	190,089	Apr. 24, 1877	1130	343, 344	11	730
Paper-cutting-machine clamp	J. Keith	193,256	July 17, 1877	726	222	12	126
Paper-damping apparatus	C. Kahler and J. Bichl	196,298	Oct. 23, 1877	656	190	12	677
Paper-damping machine	T. M. Morton	194,613	Aug. 28, 1877	854	254	12	372
Paper-damping machine	W. Scott	196,484	Oct. 23, 1877	837	241	12	703
Paper-damping machine	S. W. Wilder	187,790	Feb. 27, 1877	891	278	11	349
Paper dish	W. E. Crum and P. M. Aulabaugh	196,880	Nov. 6, 1877	151	45	12	781
Paper dish	S. E. Harlow	186,247	Jan. 16, 1877	432	133	11	81
Paper embossing and perforating machine	C. L. Nagle	196,305	Oct. 23, 1877	663	192	12	678
Paper, envelopes, &c., Machine for cutting	E. J. Frost	193,327	July 24, 1877	817	250, 251	12	147
Paper-fastener	J. G. Johnson	198,200	Dec. 18, 1877	518	160	12	1036
Paper-fastener	P. H. Sweet, jr	194,384	Aug. 21, 1877	623	187	12	331
Paper-feeding machine	E. H. Johnson	190,596	May 8, 1877	495	147	11	819
Paper-feeding machine	L. Morgenthau	198,662	Dec. 25, 1877	986	300	12	1113
Paper, Fixing water-colors on	J. Bongardt	196,422	Oct. 23, 1877	771		12	694
Paper folder and cutter	A. W. Watriss	192,102	June 19, 1877	604	184	11	1073
Paper folding and delivering machine	L. C. Crowell	188,779	Mar. 27, 1877	837	255	11	517
Paper-folding machine	R. A. Connell	196,075	Oct. 16, 1877	409	119	12	635
Paper-folding machine	L. C. Crowell	186,309	Jan. 16, 1877	488	150	11	89
Paper-folding machine	S. D. Tucker	186,384	Jan. 16, 1877	584	179	11	99
Paper-folding machine	S. D. Tucker	186,385	Jan. 16, 1877	587	180	11	100
Paper-folding machine	S. D. Tucker	188,987	Mar. 27, 1877	1040	320	11	545
Paper-folding machine, Rotary	G. Duncan, W. A. and G. A. Wilson.	185,898	Jan. 2, 1877	85	26	11	19
Paper for packing, Apparatus for the manufacture of.	J. A. Turner and J. T. Stoneham.	197,502	Nov. 27, 1877	824	245, 246	12	905
Paper from cedar wood, Moth-proof	C. D. Brown	194,986	Sept. 11, 1877	241		12	441
Paper fruit-box	W. W. Neighbour	187,548	Feb. 20, 1877	637	198	11	307
Paper-holder	A. Newbury	193,175	July 17, 1877	636	193	12	115
Paper, &c., into rolls, Machine for winding	S. H. Bingham	194,642	Aug. 28, 1877	878	262	12	375
Paper-lined bag	E. Mallalieu	194,359	Aug. 21, 1877	603	180	12	328
Paper, lining and packing	O. Long	196,531	Oct. 30, 1877	904	261	12	723
Paper-lining machine	C. L. Crum	193,364	July 24, 1877	853	261	12	151
Paper lint or felt, Process and apparatus for manufacturing.	J. Parker and J. H. Greenleaf	192,277	June 19, 1877	789	240	11	1097
Paper-machine	J. Bacon	197,004	Nov. 13, 1877	285	84	12	809
Paper-machine	M. H. Cornell	196,634	Oct. 30, 1877	999	291	12	737
Paper-machine	P. W. Hudson	195,821	Oct. 2, 1877	127	37	12	579
Paper, &c., Machine for damping, cutting, and feeding.	G. L. Jaeger	193,161	July 17, 1877	623	189	12	113
Paper, Machine for embossing and perforating	G. P. Drummond	198,241	Dec. 18, 1877	575	174	12	1044
Paper, &c., Machine for feeding and cutting	G. L. Jaeger	195,823	Oct. 2, 1877	130	37	12	579
Paper, &c., Machine for feeding and cutting	G. L. Jaeger	195,824	Oct. 2, 1877	131	37	12	580
Paper, &c., Machine for folding and cutting	G. E. Jones	196,021	Oct. 9, 1877	342	97, 98	12	617
Paper, Machine for manufacturing parchment	W. Martin	196,098	Oct. 16, 1877	436	127	12	638
Paper, Machine for the manufacture of thick	D. Scrymgeour	196,542	Oct. 30, 1877	914	265	12	725
Paper-machine pulp-dresser	W. C. Tuttle	190,390	May 1, 1877	276	81	11	782
Paper-machines, Apparatus for stretching felt jackets for rollers in.	L. Cole	194,582	Aug. 28, 1877	829	246	12	368
Paper-machine, Wire cloth for Fourdrinier	W. Buchanan and C. Smith	195,698	Oct. 2, 1877	7	2	12	562
Paper-makers, Save-all for	R. A. Morton	193,344	July 24, 1877	834	255	12	149
Paper making, Bag-washing machine for	F. A. Cloudman	197,764	Dec. 4, 1877	61	20	12	954
Paper, Manufacture of parchment	T. and T. S. Hanna	198,382	Dec. 18, 1877	700		12	1063

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page
Paper-mill rolls, Machine for dressing the fly-bars of.	J. H. Robinson	190,373	May 1, 1877	253	75	11	779
Paper or board, Building	J. M. Cobb	195,483	Sept. 25, 1877	761		12	531
Paper-perforating machine	R. T. Smith	189,144	Apr. 3, 1877	111	41	11	574
Paper-perforating machine	G. H. Springer	196,395	Oct. 23, 1877	751	216	12	691
Paper-piling machine	J. C. Kneeland	197,477	Nov. 27, 1877	797	238	12	901
Paper-placer	A. F. Gerald	196,215	Oct. 16, 1877	555	161	12	655
Paper-polishing machine	H. Braunhold	194,214	Aug. 14, 1877	442	134, 135	12	300
Paper-polishing machine	M. Weiner	186,184	Jan. 9, 1877	366	112	11	65
Paper printing surfaces, Producing	C. C. Maurice	196,466	Oct. 23, 1877	815	284	12	700
Paper, &c., Producing a water or oil proof colored outer surface upon.	C. W. Sharpless	198,222	Dec. 18, 1877	539		12	1039
Paper-pulp, Apparatus for preparing	H. Allen and L. S. Mason	196,965	Nov. 13, 1877	243	73	12	803
Paper-pulp distributer	I. Jennings	188,371	Mar. 13, 1877	417	130	11	442
Paper-pulp, Dry-wood grinder for	I. W. Bowers and D. A. Curtis	195,478	Sept. 25, 1877	757	223	12	531
Paper-pulp engine	J. S. Warren	189,671	Apr. 17, 1877	675	209	11	663
Paper-pulp from wood, Manufacture of	J. Taylor and J. T. Outterson	191,899	June 12, 1877	379	117	11	1031
Paper-pulp, Grinding wood for	J. H. Burghardt	198,236	Dec. 18, 1877	555	171	12	1041
Paper-pulp, Manufacturing	D. Hickox	196,666	Oct. 30, 1877	1033		12	741
Paper-pulp, Preparing wood for mechanical reduction to.	G. E. Marshall	193,261	July 17, 1877	731		12	127
Paper-pulp, Process and apparatus for molding	S. Wheeler	190,654	May 8, 1877	562	167	11	828
Paper-pulp, Recovering alkalies used in reducing wood to.	H. H. Furbish	194,141	Aug. 14, 1877	379		12	291
Paper-pulp screen	W. Blizzard and E. Mather	192,107	June 19, 1877	608	185	11	1074
Paper-pulp screens, Machine for cleaning	W. H. Elliot and L. F. Clark	194,960	Sept. 11, 1877	214	67	12	437
Paper-pulp washer	G. L. Lovett	188,474	Mar. 20, 1877	530	163	11	467
Paper-pulp, Wood-grinder for	A. Fickett	194,591	Aug. 28, 1877	835	248	12	369
Paper-pulp, Wood-grinder for	G. H. Mallary	187,292	Feb. 13, 1877	373	119	11	265
Paper sizing and varnishing machine	R. McNamee	194,453	Aug. 21, 1877	697	208	12	341
Paper vessel	P. M. Aulabaugh	198,332	Dec. 18, 1877	649	198	12	1055
Paper, Waxing	S. Hammerschlag	193,867	Aug. 7, 1877	65	21	12	243
Paper yarn-spool	F. Pratt	187,556	Feb. 20, 1877	643	200	11	308
Papers, Dyeing tissue and bon-bon	J. Van Skelline	192,201	June 19, 1877	705		11	1086
Papetrie and writing case	D. Lothrop	193,340	July 24, 1877	830	254	12	149
Parer, Apple	W. M. Griscom	191,138	May 22, 1877	1061	317	11	909
Parer and corer, Apple	W. E. Brock	193,220	July 17, 1877	683	208	12	121
Parer and corer, Apple	W. M. Griscom	191,670	June 5, 1877	151	47	11	996
Parer and corer, Combined apple	W. M. Griscom	191,669	June 5, 1877	150	46	11	996
Paris-green duster	J. W. Young	188,219	Mar. 6, 1877	255	79	11	413
Parquetry, Machine for making	F. Newhouse and M. H. Allen	189,872	Apr. 24, 1877	898	274, 275, 276	11	700
Partition or screen, Movable	G. W. Tripp	193,573	July 24, 1877	1056	317	12	178
Passe-partout mat	S. Phillips	194,368	Aug. 21, 1877	669	183	12	329
Passenger-recorder	W. B. Sylvester	198,434	Dec. 18, 1877	751	227	12	1070
Passenger-register	J. H. Brown	197,244	Nov. 20, 1877	549	162	12	855
Passenger-register	J. W. Fowler, D. F. Lewis, W. H. Smith, and L. Fischer.	190,021	Apr. 24, 1877	1052	321	11	720
Paste, Composition paravaseline	B. L. Budd	190,122	May 1, 1877	11		11	748
Pasting-machine	T. Goodall	186,339	Jan. 16, 1877	533	161, 162	11	94
Pattern: *See* Embroidery-pattern. Shirt-pattern.							
Pattern-chart	H. W. Subera	185,842	Jan. 2, 1877	28	9	11	12
Pattern-chart for cutting garments	L. J. Bixby	187,587	Feb. 20, 1877	672	209	11	312
Pattern-chart for cutting garments	E. H. Reeves	195,308	Sept. 18, 1877	582	170	12	497
Pattern for taking multiple impressions, Composition.	C. H. O. Radde	186,163	Jan. 9, 1877	344		11	63
Pattern for taking multiple impressions, Composition.	C. H. O. Radde	187,728	Feb. 27, 1877	828		11	341
Patterns and molds, Apparatus for making	A. W. Wimmer	187,076	Feb. 6, 1877	151	51	11	223
Patterns, Instrument for drafting	C. H. Griffin	194,086	Aug. 14, 1877	305	90, 91	12	282
Patterns for dresses and coats, Apparatus for drafting.	Z. Bauer	195,332	Sept. 18, 1877	602	177	12	501
Pavement	S. E. Gross	198,606	Dec. 25, 1877	927	282	12	1105
Pavement	J. C. Rock and J. W. Phillips	192,349	June 26, 1877	890	267	11	1122
Pavement	Z. Waters	191,273	May 29, 1877	1207	362	11	937
Pavement, Artificial-stone	C. Hense	191,962	June 12, 1877	445	138	11	1040
Pavement compound, Concrete	E. Jacques	193,409	July 24, 1877	895		12	157
Pavement, Concrete	L. S. Filbert	188,614	Mar. 20, 1877	652	202	11	484
Pavement, Concrete	A. K. Lee	188,645	Mar. 20, 1877	688	212	11	489
Pavement, Concrete	J. G. Stafford and J. W. Phillips	187,926	Feb. 27, 1877	1028	316	11	367
Pavement, Concrete-block	S. S. Ingalls	195,286	Sept. 18, 1877	562	164	12	495
Pavement, Laying concrete	S. S. Ingalls	195,287	Sept. 18, 1877	563	164	12	495
Pavement, Stone	B. F. Camp	189,337	Apr. 10, 1877	336	107	11	610
Pavement, Stone	S. E. Gross	188,357	Mar. 13, 1877	397	124	11	440
Pavement, Stone	H. B. Walbridge	197,752	Dec. 4, 1877	46	15	12	952
Pavement, Tessellated or mosaic	M. F. Lyons	198,638	Dec. 25, 1877	960	293	12	1110
Pavement, Wood	J. V. McAdam	196,303	Oct. 23, 1877	661	191	12	678
Pavement, Wood	H. M. Stow	191,194	May 22, 1877	1110	332	11	916
Pavement, Wood	H. M. Stow	193,051	July 10, 1877	509	152	12	89
Pavements, Composition for concrete	N. B. Abbott	198,260	Dec. 18, 1877	592		12	1046
Pavements, Steam-roller for composition	N. B. Abbott	197,713	Dec. 4, 1877	5	2	12	947
Paving-blocks, Composition for	J. S. Wethered	195,318	Sept. 18, 1877	590		12	499
Paving composition	L. P. Teed	197,685	Nov. 27, 1877	1005		12	932
Pea-nut cleaner	D. R. Rivers	185,969	Jan. 2, 1877	157	48	11	29
Peat compressing machine	D. Townsend	198,256	Dec. 18, 1877	588	178	12	1046
Pedometer	B. S. Church	193,224	July 17, 1877	690	211	12	122
Peg-fastening, Boot and shoe	J. Ashworth	196,179	Oct. 16, 1877	520	151	12	650
Peg-float	W. B. Arnold	190,114	May 1, 1877	2	1	11	747
Peg-float	T. F. Lippongood	186,857	Jan. 30, 1877	1062	328	11	185
Peg-float	A. Whittemore	188,035	Mar. 6, 1877	83	23, 24	11	391

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Peg float or cutter	T. C. Maris and S. M. Hart	190,057	Apr. 24, 1877	1095	333	11	725
Pegging-jack	C. M. Sparhawk	193,353	July 24, 1877	841	258	12	150
Pen	E. S. Johnson	191,154	May 22, 1877	1074	322	11	911
Pen and pencil case	S. M. Brougham	194,216	Aug. 14, 1877	444	135	12	501
Pen and pencil case	R. M. Collard	192,899	July 10, 1877	365	108	12	70
Pen and pencil case	J. B. Smith	193,190	July 17, 1877	648	197	12	116
Pen, Drawing	B. Perry	196,166	Oct. 16, 1877	505	147	12	648
Pen, Fountain	C. A. Atkinson	194,120	Aug. 14, 1877	359	106	12	188
Pen, Fountain	H. C. Benson	193,071	July 17, 1877	532	161	12	101
Pen, Fountain	H. Berlie and F. X. Lamboley	190,266	May 1, 1877	152	44	11	766
Pen, Fountain	W. S. Briggs	198,484	Dec. 25, 1877	814	247	12	1068
Pen, Fountain	A. T. Cross	189,304	Apr. 10, 1877	303	96	11	606
Pen, Fountain	A. T. Cross	190,130	May 1, 1877	18	5	11	749
Pen, Fountain	A. T. Cross	191,798	June 12, 1877	278	87	11	1019
Pen, Fountain	L. Fargue	191,950	June 12, 1877	430	133	11	1038
Pen, Fountain	P. Goehring	186,723	Jan. 30, 1877	922	286	11	167
Pen, Fountain	H. N. Hamilton	190,755	May 15, 1877	680	202	11	850
Pen, Fountain	J. M. Might and C. W. H. Taylor	186,942	Feb. 6, 1877	29	12	11	206
Pen, Fountain	J. M. Might and C. W. H. Taylor	195,719	Oct. 2, 1877	31	9	12	565
Pen, Fountain	J. W. Stanton	196,051	Oct. 9, 1877	373	106	12	622
Pen-holder	E. W. Giles	194,425	Aug. 21, 1877	668	200	12	337
Pen-holder	J. W. Green	194,038	Aug. 14, 1877	259	76	12	276
Pen-holder	A. S. Hubbell	193,118	July 17, 1877	589	178	12	108
Pen-holder	S. B. Ladd	192,439	June 26, 1877	975	293	11	1134
Pen-holder	G. W. Mabie	194,158	Aug. 14, 1877	397	118	12	294
Pen-holder	D. H. Murphy	187,887	Feb. 27, 1877	988	306	11	362
Pen-holder	P. Schrag	193,285	July 17, 1877	757	232	12	130
Pen-holder	D. M. Somers	187,238	Feb. 13, 1877	320	103	11	258
Pen holder, Fountain	E. E. Brailly	197,820	Dec. 4, 1877	114	35	12	962
Pen-holder tip	E. W. Giles	192,754	July 3, 1877	194	56	12	39
Pen-holding pencil-point protector	H. C. Benson	187,087	Feb. 6, 1877	162	54	11	225
Pen-rack	H. W. Forman	191,331	May 29, 1877	1256	379	11	944
Pen, Stencil	T. A. Edison	196,747	Nov. 6, 1877	10	3	12	762
Pen, Stencil	A. E. Hix	185,827	Jan. 2, 1877	14	5	11	10
Pen, Stencil	H. M. Paine	192,626	July 3, 1877	72	21	12	22
Pencil	O. M. Allen	189,886	Apr. 24, 1877	916	279	11	702
Pencil	F. Sholes	191,816	June 12, 1877	300	93	11	1021
Pencil, Adding	C. C. Fields	187,114	Feb. 6, 1877	189	62	11	228
Pencil, Artist's	O. P. Gash	193,813	Aug. 7, 1877	15	5	12	236
Pencil, Copying	C. Walpuski	192,555	June 26, 1877	1090	330	11	1149
Pencil-holder	E. W. Grove	187,621	Feb. 20, 1877	708	219	11	316
Pencil-holder	T. P. and S. B. Marshall	194,306	Aug. 21, 1877	549	165	12	321
Pencil holder and sharpener combined	E. B. Lake	196,676	Oct. 30, 1877	1042	302	12	742
Pencil, Lead	H. T. Cushman	192,902	July 10, 1877	367	109	12	70
Pencil, Lead	P. Schrag	197,412	Nov. 20, 1877	716	214	12	881
Pencil or crayon, Paint	W. J. Holton and J. E. Field	191,856	June 12, 1877	341	105	11	1026
Pencil, Pocket	D. M. Somers	188,721	Mar. 20, 1877	760	234	11	498
Pencil-sharpener	G. Agnew	189,592	Apr. 17, 1877	600	185	11	653
Pencil-sharpener	E. W. Frost	192,752	July 3, 1877	192	55	12	39
Pencil-sharpener	P. R. Hansbury	192,258	June 19, 1877	774	235	11	1095
Pencil-sharpener	G. A. McLane	194,525	Aug. 28, 1877	778	231	12	361
Pencil-sharpener	G. H. Park	193,545	July 24, 1877	1029	309	12	175
Pencil-sharpener	J. E. Roache and W. F. Redding	189,060	Apr. 3, 1877	46	17	11	565
Pencil-sharpener	H. Wakeman	198,169	Dec. 11, 1877	466	146	12	1022
Pencil-sharpener and point-protector combined	J. Watrous	186,777	Jan. 30, 1877	973	302	11	174
Pencil sharpener, Slate	T. B. Merrill	187,721	Feb. 27, 1877	823	256	11	340
Pencil sharpener, Slate	J. R. Teal and G. Moulder	187,667	Feb. 6, 1877	142	47	11	222
Pencils, Machine for printing and embellishing lead	H. B. Horton	190,589	May 8, 1877	487	145	11	818
Pendulum-balls, Regulating attachment to	H. C. Jacot	194,915	Sept. 4, 1877	157	49	12	422
Perambulator	E. G. Allen	188,835	Mar. 27, 1877	897	273	11	525
Permutation-lock	H. Clarke	197,962	Dec. 11, 1877	266	81, 82	12	992
Permutation-lock	T. Fox	193,500	July 24, 1877	980	297	12	170
Permutation-lock	M. Schwaerzler	197,568	Nov. 27, 1877	893	266	12	915
Pessary	C. N. Fowler	186,469	Jan. 23, 1877	680	208	11	125
Pessary, Medicated ring	R. H. Kline	196,979	Nov. 13, 1877	259	77	12	805
Petroleum products and methods of obtaining the same.	H. W. C. Tweddle	189,401	Apr. 10, 1877	397		11	618
Petroleum products and methods of obtaining the same.	H. W. C. Tweddle	189,402	Apr. 10, 1877	398		11	618
Phonetic and diacritical notation	N. E. Dawson	198,507	Dec. 25, 1877	837	254	12	1091
Phosphates, Treatment of mineral	P. G. L. G. Designolle	196,881	Nov. 6, 1877	152		12	781
Photographer's bath-warmer	C. J. Fellrath and L. Schnell	188,789	Mar. 27, 1877	849	257, 258	11	518
Photographic burnisher	W. G. Entrekin	197,259	Nov. 20, 1877	562	166	12	857
Photographic burnisher	J. H. Ferguson	189,348	Apr. 10, 1877	344	110	11	611
Photographic camera	J. O. Jewett and P. F. Leonard	187,976	Mar. 6, 1877	22	6	11	383
Photographic camera	J. C. Moss	196,591	Oct. 30, 1877	961	279	12	731
Photographic chair	J. Winter	196,731	Oct. 30, 1877	1096	318	12	750
Photographic eye-rest apparatus	G. W. Baker	192,854	July 10, 1877	325	96	12	64
Photographic paper translucent, Compound for rendering.	H. V. Holmes	196,454	Oct. 23, 1877	801		12	698
Photographic pictures, Mounting	J. J. Hartman	187,134	Feb. 6, 1877	206		11	231
Photographic pictures, Printing	A. Roth	197,410	Nov. 20, 1877	715		12	881
Photographic-plate holder	C. L. Kempf	188,377	Mar. 13, 1877	422	131	11	443
Photographic printing apparatus	O. Sarony	190,253	May 1, 1877	135	40	11	761
Photographic printing-frame	H. L. Walter and R. Durrin	191,906	June 12, 1877	384	119	11	1032
Photographs, Coloring	D. Chamberlain	194,579	Aug. 28, 1877	827		12	368
Photographs, Coloring	J. A. Schultz	194,472	Aug. 21, 1877	719		12	341
Photographs, Enameling	M. R. Freeman	190,023	Apr. 24, 1877	1057	321	11	720
Photographs, Machine for washing	N. J. Miller	187,163	Feb. 6, 1877	231	75	11	234
Piano	K. V. Barnekoo	195,329	Sept. 18, 1877	599	176	12	500
Piano-action	H. V. Bochme	186,708	Jan. 30, 1877	909	281, 282	11	165
Piano-action	J. D. Elliot	193,495	July 24, 1877	977	296	12	169

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Piano-action	G. Wessel, A. Nickel, and R. Gross.	188,706	Mar. 20, 1877	747	229	11	496
Piano-action frame	H. Kranich and J. Bach	196,912	Nov. 6, 1877	185	54	12	785
Piano action frame, Upright	P. Gmeblin	190,306	May 1, 1877	191	57	11	771
Piano action, Upright	G. W. Neill	197,526	Nov. 27, 1877	851	253	12	909
Piano attachment	C. Boecker and G. Finck	194,509	Aug. 28, 1877	763	227	12	359
Piano, Bell	W. H. Wood	195,068	Sept. 11, 1877	322	98	12	452
Piano-forte	C. F. Chickering	197,332	Nov. 20, 1877	639	189	12	869
Piano-forte	H. Kranich and J. Bach	191,444	May 29, 1877	1360	411	11	957
Piano-forte	O. Lemcke	197,736	Dec. 4, 1877	31	10	12	950
Piano-forte action	J. W. Evans	193,325	July 24, 1877	816	250	12	146
Piano-forte action	W. Muth	191,810	June 12, 1877	293	91	11	1021
Piano-forte action, Upright	F. Frickinger	189,029	Apr. 3, 1877	19	6	11	561
Piano-forte attachment	A. Steinway	190,639	May 8, 1877	544	162	11	825
Piano-forte attachment	E. Zachariae	186,397	Jan. 16, 1877	598	183, 184	11	101
Piano-forte bridge	J. Herald	191,587	June 5, 1877	72	21	11	986
Piano-forte key	U. Pratt	190,363	May 1, 1877	243	72	11	778
Piano-forte sounding-board	S. P. Hinds	197,971	Dec. 11, 1877	275	84	12	994
Piano-fortes, Device for stringing and tuning	G. Morgan	186,490	Jan. 23, 1877	696	214	11	127
Piano-fortes, Stringing	P. Brenner	188,579	Mar. 20, 1877	623	192	11	480
Piano-fortes, Stringing	T. S. Gould	193,943	Aug. 7, 1877	144	44	12	254
Piano-frame	W. Muth	190,507	May 8, 1877	413	120	11	808
Piano-hammer	G. C. Smith	196,712	Oct. 30, 1877	1078	313	12	748
Piano-keys, Machine for dressing	M. G. Wilder and W. H. McNeil	195,911	Oct. 9, 1877	229	65, 66	12	601
Piano, &c., lock	A. S. Blake	186,450	Jan. 23, 1877	663	203	11	122
Piano or organ indicator	N. P. B. Curtiss	194,654	Aug. 28, 1877	888	265	12	377
Piano pedal attachment	G. C. A. Class	186,110	Jan. 9, 1877	296	89	11	56
Piano pedal attachment	E. M. Holder	197,370	Nov. 20, 1877	675	201	12	875
Piano stringing and tuning device	C. E. and A. F. Rogers	197,467	Nov. 20, 1877	712	213	12	880
Piano-snpport	J. Fairman	198,727	Dec. 25, 1877	1051	320	12	1122
Piano, Uprigbt	W. B. Tremaine	195,691	Sept. 25, 1877	954	285	12	559
Pianos and organs, Key-board for	M. H. McChesney	197,648	Nov. 27, 1877	975	290	12	927
Pianos, Device for stringing	G. Morgan	189,768	Apr. 17, 1877	775	238	11	675
Pianos, Hollow support for	J. Fairman	189,441	Apr. 10, 1877	434	137	11	623
Pianos, organs, &c., Rack attachment for	E. A. Norton	198,038	Dec. 11, 1877	333	104	12	1003
Pianos, Stringing	J. J. Hull and W. Raynor	194,151	Aug. 14, 1877	388	115	12	292
Pick	W. L. Cousland	195,261	Sept. 18, 1877	539	157	12	491
Pick	J. L. Woolley	197,443	Nov. 20, 1877	751	224	12	887
Pick-eyes, Machine for forming	A. C. Jordan and C. Konold	188,643	Mar. 20, 1877	684	211	11	488
Pick-eyes, Machine for making	J. C. Klein	196,363	Oct. 23, 1877	718	207	12	686
Picker: *See* Cotton-picker. Loom-picker. Fruit-picker.							
Picker-teeth, Machine for making	R. Aldrich	192,669	July 3, 1877	126	34	12	29
Pickle-assorter	J. H. Heinz	197,934	Dec. 11, 1877	235	72	12	988
Pickle, &c., fork	S. Poole	198,313	Dec. 18, 1877	632	192	12	1053
Picture and show-card mat	E. A. Galindo	188,009	Mar. 6, 1877	53	15	11	387
Picture-exhibitor	J. Hannerty	191,673	June 5, 1877	154	48	11	997
Picture-exhibitor	H. E. Hezekiah	192,368	June 26, 1877	909	273	11	1125
Picture-exhibitor	W. H. Lewis	190,027	Oct. 9, 1877	351	100	12	618
Picture-exhibitor	S. A. Peden	187,726	Feb. 27, 1877	827	258	11	341
Picture-exhibitor	F. Prince	189,784	Apr. 17, 1877	791	243	11	677
Picture-exhibitor	O. Williamson	189,980	Apr. 24, 1877	1003	307	11	714
Picture-frame	S. A. Bowers and W. Murphy	191,795	June 12, 1877	276	86	11	1019
Picture-frame	A. Greenwood	195,600	Sept. 25, 1877	870	258	12	547
Picture-frame	C. Lippe	197,738	Dec. 4, 1877	32	11	12	951
Picture-frame	E. Maux	192,178	June 19, 1877	681	209	11	1083
Picture-frame	F. Odenbaugh	190,068	Apr. 24, 1877	1106	336, 337	11	727
Picture-frame	L. Pattberg	195,530	Sept. 25, 1877	804	238	12	538
Picture-frame	S. Sargeant	190,517	May 8, 1877	421	123	11	809
Picture-frame, Glass	J. W. Fleischmann	192,365	June 26, 1877	906	272	11	1124
Picture-frames, &c., Making artificial moss for ornamenting.	M. J. McColl	195,146	Sept. 11, 1877	403		12	464
Picture-hanger	I. Piles	190,690	May 15, 1877	614	183	11	841
Pictnre-hanging device	W. D. Smith	198,703	Dec. 25, 1877	1023	311	12	1118
Picture-holders, Wire stand for	W. J. Johnson	197,554	Nov. 27, 1877	881	262	12	913
Picture-hook	R. S. Merrill	194,707	Aug. 28, 1877	939	279	12	384
Picture-hook	R. S. Merrill	194,708	Aug. 28, 1877	940	279	12	384
Picture-nail	W. Gross	197,513	Nov. 27, 1877	836	250	12	906
Pictures, Mounting	J. W. Junker	197,936	Dec. 11, 1877	236	72	12	988
Pictures, Preserving and finishing	L. T. Luther	189,117	Apr. 3, 1877	94		11	571
Pictures, Producing stereoscopic	H. A. Reynolds	193,998	Aug. 7, 1877	198	60	12	261
Pictures, Securing	W. T. Murphy	192,384	June 26, 1877	926	278	11	1127
Pictnres upon fabrics, Producing enlarged	W. Winter	196,510	Oct. 23, 1877	867		12	706
Pigment base, Making a	H. Knight	186,738	Jan. 30, 1877	936		11	169
Pile-driver	J. Gregg	186,831	Jan. 30, 1877	1035	319	11	1r2
Pile for bulkheads, &c	M. L. Parry	194,309	Aug. 21, 1877	552	166	12	322
Pile, Thermo-electric	C. and L. Wray, jr.	197,196	Nov. 13, 1877	483	143, 144	12	838
Piles and timber, Preserving wooden	J. P. Culver	195,990	Oct. 9, 1877	313	88	12	613
Piles, Grapnel for submerged	J. N. Bogert and H. C. Holmes	189,688	Apr. 17, 1877	692	213	11	665
Piles out of the ground, Drawing broken	J. P. Sheldon and O. F. Graves	189,962	Apr. 24, 1877	985	301	11	711
Pill-machine	J. Hill	197,779	Dec. 4, 1877	76	24	12	956
Pills, lozenges, &c., Machine for making	T. J. Young	189,605	Mar. 27, 1877	1056	325	11	547
Pillow-shams, Device for securing	J. R. Cross	193,854	Aug. 7, 1877	53	17	12	242
Pillows, Ventilating	J. T. Hatfield	190,851	May 15, 1877	765	227	11	862
Pin: *See* Clothes-pin. Safety-pin. Hair-crimping pin. Sagger-pin. Jewelry-pin. Shawl-pin.							
Pin-box	J. Bryan	191,925	June 12, 1877	402	125	11	1034
Pin-package	J. H. Bronson	187,592	Feb. 20, 1877	676	210	11	312

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Pins, dowels, &c., Machine for cutting	F. H. Kane	186,348	Jan. 16, 1877	544	165	11	95
Pinchers	M. M. Pettes	193,547	July 24, 1877	1031	310	12	175
Pipe:							
See Blow-pipe. Gas and water pipe. Glass pipe. Locomotive exhaust-pipe. Organ-pipe. Smoking-pipe. Steam-pipe. Stove-pipe. Tobacco-pipe. Water-supply pipe. Windlass deck pipe.							
Pipe and bar cutter	J. Astall	196,323	Oct. 23, 1877	681	196	12	681
Pipe and cigar holder	J. T. Connolly	190,286	May 1, 1877	173	51	11	768
Pipe and hose coupling	T. Addison	196,104	Oct. 16, 1877	441	129	12	639
Pipe and nut wrench with cutters	B. L. Walker	194,488	Aug. 21, 1877	732	218	12	346
Pipe and tube coupling	W. H. Butler	198,726	Dec. 25, 1877	1050	319	12	1122
Pipe-clamp	P. W. Meehan	197,560	Nov. 27, 1877	886	263	12	914
Pipe-cleaning tool	S. D. Strohm	195,181	Sept. 11, 1877	442	132	12	470
Pipe-coupling	M. Allen	189,593	Apr. 17, 1877	601	185	11	653
Pipe-coupling	W. H. Bailey	187,343	Feb. 13, 1877	425	134	11	272
Pipe-coupling	E. S. Chapell	196,875	Nov. 6, 1877	146	44	12	781
Pipe-coupling	H. Gnyer	196,084	Oct. 16, 1877	419	121	12	636
Pipe-coupling	E. A. Leland	187,394	Feb. 13, 1877	475	148	11	278
Pipe-coupling	S. Lightburne, jr	189,477	Apr. 10, 1877	466	147	11	627
Pipe-coupling	R. H. Moss	193,174	July 17, 1877	635	192	12	115
Pipe-coupling	H. Pennie	193,993	Aug. 7, 1877	193	58	12	260
Pipe-coupling	R. L. Pirsson and J. S. Oliver	187,982	Mar. 6, 1877	25	7	11	384
Pipe-coupling	T. Weiss	188,213	Mar. 6, 1877	249	78	11	413
Pipe coupling and joint	E. T. Steen	198,317	Dec. 18, 1877	635	193	12	1053
Pipe coupling, Lead	G. H. Webster	190,651	May 8, 1877	558	166	11	827
Pipe-coupling, Multifold	E. A. Leland	186,351	Jan. 16, 1877	547	166	11	95
Pipe-cutter	G. Post	195,307	Sept. 18, 1877	581	170	12	497
Pipe-cutting machine	N. Watson	190,798	May 15, 1877	714	212	11	855
Pipe-elbow	W. Borrman	190,273	May 1, 1877	159	47	11	767
Pipe-elbow blanks, Machine for cutting	C. H. Amann and L. A. Harker	194,066	Aug. 14, 1877	286	85	12	280
Pipe-elbows, Device for cutting sheet metal for curved.	G. Choate	191,312	May 29, 1877	1241	373	11	942
Pipe-elbows, Device for punching sheet metal for	G. Choate	191,311	May 29, 1877	1240	373	11	942
Pipe for street gas and water stop-cock boxes	A. W. Morgan	193,827	Aug. 7, 1877	31	10	12	238
Pipe-joint	A. W. Foster, jr	190,965	May 22, 1877	896	265	11	887
Pipe-joint	G. Matheson	191,769	June 12, 1877	251	79	11	1015
Pipe-joint	G. Matheson	191,770	June 12, 1877	252	79	11	1015
Pipe, Machine for jointing sections of	M. W. House	198,729	Dec. 25, 1877	1053	320, 321	12	1122
Pipe, Molding and casting	J. K. Dimmick	190,835	May 15, 1877	747	221	11	860
Pipe-molding machine	H. R. Smith	190,634	May 8, 1877	536	159, 160	11	825
Pipe-plug	R. H. Dalzell	192,324	June 26, 1877	865	261	11	1119
Pipe-sockets, Machine for corrugating	M. Blakey	191,220	May 29, 1877	1159	347	11	931
Pipe-stem	T. W. Ball	194,545	Aug. 28, 1877	797	237	12	363
Pipe tongs and cutters	E. F. Barnes	186,099	Jan. 9, 1877	287	86	11	55
Pipe-wrench	W. Eberhard	189,615	Apr. 17, 1877	621	192	11	656
Pipe-wrench	G. Fletcher	191,666	June 5, 1877	148	46	11	996
Pipe-wrench	E. R. Mathews	189,567	Apr. 17, 1877	574	178	11	650
Pipe-wrench	C. Peterson and A. Dunnebake	185,958	Jan. 2, 1877	148	45	11	28
Pipe-wrench	J. W. Vermillion	196,401	Oct. 23, 1877	756	218	12	692
Pipe wrench or tongs	E. D. Barrett	197,756	Dec. 4, 1877	54	18	12	953
Pipe wrench with cutter	W. E. Thornton	198,709	Dec. 25, 1877	1028	313	12	1119
Pipes from bursting, Device for preventing	A. Bujac	186,305	Jan. 16, 1877	483	148	11	88
Pipes from mortar, Mold for making	E. M. Hamilton	196,295	Oct. 23, 1877	653	189	12	677
Pipes, Joining	J. F. Parsons	186,435	Jan. 23, 1877	647	198	11	120
Pistol, &c., lock	B. Haviland and G. P. Gunn	187,135	Feb. 6, 1877	207	67	11	231
Piston	R. M. Beck	192,409	June 26, 1877	949	284	11	1130
Piston	G. F. Blake	185,887	Jan. 2, 1877	70	22	11	17
Piston	L. Richner	192,715	July 3, 1877	161	46	12	35
Piston for air and gas engines	G. B. Brayton	190,411	May 8, 1877	315	92	11	796
Piston, Lubricating	H. A. Jamieson	198,391	Dec. 18, 1877	708	215	12	1064
Pitch, Vessel for molding	E. B. Warren and J. C. Nippes	195,062	Sept. 11, 1877	318	96	12	451
Pitch, Vessel for molding	E. B. Warren and J. C. Nippes	195,063	Sept. 11, 1877	319	96	12	452
Pitcher	C. Moyer	191,771	June 12, 1877	253	80	11	1016
Pitcher	E. A. Parker	193,277	July 17, 1877	748	229	12	129
Pitcher, Covered	S. W. Babbitt	194,858	Sept. 4, 1877	103	32	12	414
Pitman	O. Cooley	191,116	May 22, 1877	1039	311	11	906
Pitman	H. Essex	197,770	Dec. 4, 1877	65	21	12	955
Pitman	H. L. Hopkins	190,860	May 15, 1877	770	229	11	863
Pitman	D. L. Lewis	188,805	Mar. 27, 1877	867	264	11	521
Pitman-box	E. M. Krum	191,159	May 22, 1877	1079	323	11	911
Pitman-connection	J. W. Blood	190,733	May 15, 1877	662	196	11	848
Pitman-connection, journal, or axle, Compensating	H. C. White	188,453	Mar. 13, 1877	498	154	11	454
Pitman-head for oil-wells	J. Sharp	197,743	Dec. 4, 1877	36	12	12	951
Pitman-rod	B. E. Carpenter	189,187	Apr. 3, 1877	153	53	11	580
Pitman-rod connection for steam-engines	R. Schrader	193,730	July 31, 1877	1229	369	12	214
Plaiting-board	S. G. Otis	188,937	Mar. 27, 1877	991	304	11	538
Plaiting-board	H. P. Young and F. Calvert	188,561	Mar. 20, 1877	606	188	11	478
Plaiting-iron	J. G. Gingras	194,142	Aug. 14, 1877	380	112, 113	12	291
Plaiting-machine	J. F. Barrow and J. Solter	192,216	June 19, 1877	721	221	11	1088
Plaiting-machine	L. B. Berrien	191,825	June 12, 1877	311	96	11	1022
Plaiting-machine	J. L. and G. H. Bliss	192,221	June 19, 1877	727	222	11	1089
Plaiting-machine	J. H. Brown	192,860	July 10, 1877	330	97	12	65
Plaiting-machine	C. S. Caple	198,488	Dec. 25, 1877	819	248	12	1089
Plaiting-machine	J. E. Chapin	191,832	June 12, 1877	319	99	11	1023
Plaiting-machine	T. Hagerty	189,030	Apr. 3, 1877	19	7	11	561
Plaiting-machine	E. S. Harding	186,246	Jan. 16, 1877	431	132	11	81
Plaiting-machine	M. M. Macdonald	193,169	July 17, 1877	631	191	12	114

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Plaiting machine	M. Noville	185,949	Jan. 2, 1877	139	42	11	26
Plaiting-machine	E. Nickerson and J. K. Blanchard	187,299	Feb. 13, 1877	383	121	11	266
Plaiting-machine	W. Painter	193,629	July 10, 1877	484	146	12	86
Plaiting-machine	H. B. Rorke	193,131	July 17, 1877	600	181	12	109
Plaiting-machine	J. H. Rowe	193,780	July 31, 1877	1279	384, 385	12	221
Plaiting-machine	M. Toohey	192,098	June 19, 1877	601	183	11	1073
Plane, Bench	C. L. Adancourt	192,402	June 26, 1877	944	282	11	1129
Plane, Bench	H. Baecker	198,180	Dec. 18, 1877	495	154	12	1033
Plane, Bench	L. Bailey	189,415	Apr. 10, 1877	409	129	11	620
Plane, Bench	L. Bailey	196,068	Oct. 16, 1877	400	115	12	633
Plane, Bench	H. M. Clark	195,481	Sept. 25, 1877	759	224	12	531
Plane, Bench	H. A. Foss	186,998	Feb. 6, 1877	83	28	11	213
Plane, Bench	G. Gocher	189,453	Apr. 10, 1877	445	139	11	624
Plane, Bench	W. Grössler	196,444	Oct. 23, 1877	792	228	12	697
Plane, Bench	C. H. Hawley	196,450	Oct. 23, 1877	797	230	12	698
Plane, Bench	S. D. Sargent	192,132	June 19, 1877	636	194	11	1077
Plane, Bench	W. Wood	191,393	May 29, 1877	1305	396	11	951
Plane, Circular	H. M. Clark	195,480	Sept. 25, 1877	758	223	12	531
Plane-irons, Device for adjusting	J. A. Traut	186,281	Jan. 16, 1877	461	142	11	85
Plane-irons, Manufacture of blank	L. Spring	187,191	Feb. 6, 1877	254	83	11	237
Planer, Blind-slat	R. S. Griffin	197,774	Dec. 4, 1877	72	22	12	956
Planer, Iron	G. E. Brettell	187,960	Mar. 6, 1877	4	1	11	381
Planing and molding machines, Pressure device for.	C. R. Patterson	188,259	Mar. 13, 1877	301	95	11	427
Planing and molding machines, Sectional pressure-bar for.	J. S. Loomis	187,472	Feb. 20, 1877	570	176	11	298
Planing-machine	W. W. Brewster	192,322	June 26, 1877	863	261	11	1119
Planing-machine chip-breaker	E. Benjamin	196,739	Nov. 6, 1877	2	1	12	761
Planing-machine presser-bar	E. D. Barrett	193,313	July 24, 1877	805	247	12	145
Planing-machine pressure-bar	G. E. Newall	188,936	Mar. 27, 1877	990	304	11	538
Planing machine, Wood	E. Benjamin	196,327	Oct. 23, 1877	685	197	12	681
Planing machine, Wood	F. Godeau	188,046	Mar. 6, 1877	90	27	11	392
Planing machine, Wood	P. P. Josef	197,475	Nov. 27, 1877	795	237	12	901
Plant and tree protector	J. O. Antisdale	195,913	Oct. 9, 1877	232	66	12	602
Plant box, Window	F. H. Piaget	187,771	Feb. 27, 1877	870	270, 271	11	346
Plant-pot	H. F. Reinecke	197,406	Nov. 20, 1877	711	212	12	880
Plant-setter and seed-planter combined	J. C. Terrill	196,840	Nov. 6, 1877	102	31	12	775
Plants, Apparatus for applying poison to	J. L. Goodin	198,014	Dec. 11, 1877	314	97	12	1000
Plants, Machine for setting	C. J. and H. W. Williams	186,698	Jan. 30, 1877	901	279	11	164
Plants, Raising and transplanting	C. Loskamp	191,806	June 12, 1877	288	90	11	1020
Plants, Ventilating glass shade and cover for	S. J. Pardessus	196,165	Oct. 16, 1877	504	147	12	648
Planter	L. Schofield	188,547	Mar. 20, 1877	593	183	11	476
Planter and cultivator combined, Corn	E. C. Gage	186,244	Jan. 16, 1877	429	132	11	81
Planter and cultivator, Corn	L. E. Williams	190,944	May 15, 1877	856	254	11	873
Planter and fertilizer-distributer, Combined corn	A. D. Shoemaker	197,231	Nov. 20, 1877	536	158, 159	12	853
Planter and fertilizer-distributer, Corn	F. U. Stokes	194,313	Aug. 21, 1877	556	168	12	322
Planter and fertilizer-distributer, Cotton	J. A. Shine	187,056	Feb. 6, 1877	133	44	11	221
Planter and grain-drill, Corn	J. L. Hill	191,054	May 22, 1877	981	292	11	898
Planter and grain-drill, Sulky corn	T. Terry	196,954	Nov. 6, 1877	224	66	12	791
Planter and manure-distributer	J. Real	194,465	Aug. 21, 1877	712	212	12	343
Planter attachment, Corn	W. R. Cunningham	190,830	May 15, 1877	744	220	11	859
Planter attachment, Corn	W. W. S. Kime	198,629	Dec. 25, 1877	953	291	12	1108
Planter attachment, Corn	R. Wagoner, jr	196,728	Oct. 30, 1877	1092	317	12	750
Planter attachment for hoes, Seed	J. R. Reynolds	187,174	Feb. 6, 1877	240	79	11	235
Planter, Check-row	L. L. Haworth	197,271	Nov. 20, 1877	574	170	12	859
Planter, Combined potato and corn	J. Custer	191,838	June 12, 1877	323	100	11	1024
Planter, Corn	A. O. Abbott	196,616	Oct. 30, 1877	981	286	12	735
Planter, Corn	J. W. Allison	198,329	Dec. 18, 1877	646	197	12	1055
Planter, Corn	D. C. Bacon	189,173	Apr. 3, 1877	137	49	11	578
Planter, Corn	G. E. Baites	194,885	Sept. 4, 1877	127	39	12	418
Planter, Corn	H. H. Baltzly	197,200	Nov. 20, 1877	507	149	12	849
Planter, Corn	J. O. Bennett	191,915	June 12, 1877	392	122	11	1033
Planter, Corn	J. E. Bering and A. and M. Barnes	197,818	Dec. 4, 1877	111	34	12	962
Planter, Corn	T. T. Butler	195,442	Sept. 25, 1877	719	212	12	526
Planter, Corn	J. Campbell	195,570	Sept. 25, 1877	839	249, 250	12	543
Planter, Corn	J. Case	194,127	Aug. 14, 1877	365	109	12	189
Planter, Corn	W. L. Chism	193,110	July 17, 1877	582	176	12	107
Planter, Corn	K. M. Christrup and C. F. Schneider.	192,737	July 3, 1877	177	51	12	37
Planter, Corn	J. Clarridge	186,802	Jan. 30, 1877	999	310	11	177
Planter, Corn	L. Defenbaugh	196,641	Oct. 30, 1877	1010	293	12	738
Planter, Corn	W. D. Ewart	196,291	Oct. 23, 1877	647	187, 188	12	676
Planter, Corn	J. Feldmier	193,498	July 24, 1877	978	297	12	169
Planter, Corn	C. H. Foss	186,928	Feb. 6, 1877	8	3	11	204
Planter, Corn	H. E. Foster	197,352	Nov. 20, 1877	657	195	12	872
Planter, Corn	R. Fox	189,932	Apr. 24, 1877	959	293	11	708
Planter, Corn	W. Galley	196,004	Oct. 9, 1877	327	92	12	615
Planter, Corn	E. C. Gillett and J. F. Poole	194,901	Sept. 4, 1877	143	45	12	420
Planter, Corn	W. Gilman	186,203	Jan. 16, 1877	396	121	11	76
Planter, Corn	C. L. Goethals	188,888	Mar. 27, 1877	946	288	11	532
Planter, Corn	J. B. Greene	192,255	June 19, 1877	769	234	11	1094
Planter, Corn	M. Gregg	185,915	Jan. 2, 1877	106	32	11	22
Planter, Corn	M. Gregg	192,757	July 3, 1877	197	56, 57	12	39
Planter, Corn	A. F. Hall	197,519	Nov. 27, 1877	876	260	12	912
Planter, Corn	A. F. Hammond	196,146	Oct. 16, 1877	489	142	12	645
Planter, Corn	F. A. and J. W. Hartnagel	192,694	July 3, 1877	146	41	12	32
Planter, Corn	G. D. Haworth	197,551	Nov. 27, 1877	878	261	12	913
Planter, Corn	A. J. Hintz	187,011	Feb. 6, 1877	95	32	11	215
Planter, Corn	H. Jones	186,844	Jan. 30, 1877	1048	323, 324	11	183

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Planter, Corn	H. Jones	196,908	Nov. 6, 1877	178	52	12	785
Planter, Corn	A. C. Kent	196,121	Oct. 16, 1877	465	135	12	642
Planter, Corn	L. F. King and H. M. Funk	193,766	July 31, 1877	1267	380	12	219
Planter, Corn	E. H. Lancaster and T. Shull	193,258	July 17, 1877	728	222	12	127
Planter, Corn	J. Leitch	189,315	Apr. 10, 1877	316	99, 100	11	608
Planter, Corn	S. P. Loyd	186,859	Jan. 30, 1877	1064	329	11	185
Planter, Corn	G. B. Lynch	193,527	July 24, 1877	1011	304	12	173
Planter, Corn	S. Lyon	193,978	Aug. 7, 1877	180	54	12	258
Planter, Corn	H. McQuiniff	188,024	Mar. 6, 1877	64	19	11	389
Planter, Corn	H. W. Meyerhoff	189,766	Apr. 17, 1877	774	237	11	675
Planter, Corn	W. J. Nicholson	193,719	July 31, 1877	1220	366	12	212
Planter, Corn	F. Petersen	187,044	Feb. 6, 1877	124	41	11	219
Planter, Corn	J. Rand	190,900	May 15, 1877	809	239	11	867
Planter, Corn	M. C. Randol	196,387	Oct. 23, 1877	745	214	12	690
Planter, Corn	J. Rosenkranz	197,178	Nov. 13, 1877	464	137	12	835
Planter, Corn	S. Rydbeck	196,538	Nov. 6, 1877	211	62	12	789
Planter, Corn	J. L. G. Schmidt	186,275	Jan. 16, 1877	457	140	11	85
Planter, Corn	L. Scofield	194,004	Aug. 7, 1877	204	62	12	262
Planter, Corn	F. W. Shellabarger	190,087	Apr. 24, 1877	1126	342, 343	11	729
Planter, Corn	M. O. Skree	188,683	Mar. 20, 1877	724	622	11	493
Planter, Corn	T. Sparks	188,430	Mar. 13, 1877	474	146	11	450
Planter, Corn	W. M. Steel	193,465	July 24, 1877	946	288	12	165
Planter, Corn	J. G. and J. H. Stokesbary	186,766	Jan. 30, 1877	962	299	11	173
Planter, Corn	H. Striewig	188,980	Mar. 27, 1877	1035	318	11	544
Planter, Corn	G. Tatlock and S. Newby	188,694	Mar. 20, 1877	735	225	11	495
Planter, Corn	E. P. Terrell and J. Foos	195,418	Sept. 18, 1877	682	202	12	513
Planter, Corn	D. R. Vivion	194,745	Aug. 28, 1877	982	291	12	389
Planter, Corn	H. Wagoner	189,156	Apr. 3, 1877	125	45	11	576
Planter, Corn	C. Woods	192,612	July 3, 1877	58	17	12	20
Planter, Corn and cotton	C. Domschke	198,581	Dec. 25, 1877	899	275	12	1101
Planter, Corn and seed	H. F. Baker	191,019	May 22, 1877	952	282	11	894
Planter, Cotton	D. Bronaugh	198,076	Dec. 11, 1877	367	114	12	1009
Planter, Cotton	J. W. Elliott	196,886	Nov. 6, 1877	157	46	12	782
Planter, Cotton	D. W. Reed	196,933	Nov. 6, 1877	207	60	12	788
Planter, Cotton-seed	R. Ball	189,174	Apr. 3, 1877	138	49, 50	11	578
Planter, Cotton-seed	J. Clarridge	186,860	Jan. 30, 1877	997	310	11	177
Planter, Cotton-seed	P. Trayser	197,953	Dec. 11, 1877	252	78	12	991
Planter, Cotton-seed and corn	J. R. Palmero	196,823	Nov. 6, 1877	84	26	12	773
Planter, Cotton-seed and corn	J. A. True	186,963	Feb. 6, 1877	50	17	11	208
Planter, Hand	S. P. Babcock	193,590	July 31, 1877	1091	327	12	195
Planter, Hand	J. K. Taylor	195,465	Sept. 25, 1877	742	219	12	529
Planter, Hand check-row	L. L. and G. D. Haworth	197,272	Nov. 20, 1877	575	170	12	859
Planter, Hand corn	J. H. Arney	187,581	Feb. 20, 1877	666	207	11	311
Planter, Hand corn	M. Cottle	195,350	Sept. 18, 1877	617	182	12	503
Planter, Hand corn	S. T. Ferguson	196,078	Oct. 16, 1877	412	119	12	635
Planter, Hand corn	P. McCollum	197,045	Nov. 13, 1877	328	97	12	815
Planter, Hand corn	N. A. Palmer	193,129	July 17, 1877	598	181	12	109
Planter, Hand corn	W. E. Seelye	189,142	Apr. 3, 1877	111	40	11	574
Planter, Hand seed	F. B. Preston	191,882	June 12, 1877	361	112	11	1029
Planter, Marker for corn	C. M. Hoghton	198,514	Dec. 25, 1877	844	257	12	1092
Planter, Seed	J. H. Adair	192,211	June 19, 1877	716	219	11	1088
Planter, Seed	W. S. Barton	195,743	Oct. 2, 1877	54	16	12	568
Planter, Seed	C. H. Boyd	197,323	Nov. 20, 1877	630	185, 186	12	867
Planter, Seed	W. A. Bryant and G. W. D. Partridge.	191,104	May 22, 1877	1029	308	11	905
Planter, Seed	J. W. Burris	197,092	Nov. 13, 1877	382	112	12	823
Planter, Seed	D. J. Davis	186,231	Jan. 16, 1877	419	128	11	79
Planter, Seed	M. N. De Veara	191,845	June 12, 1877	329	102	11	1025
Planter, Seed	E. Gerber	194,424	Aug. 21, 1877	666	199	12	337
Planter, Seed	B. F. Miller	187,546	Feb. 20, 1877	634	197	11	307
Planter, Seed	W. D. Miller	188,811	Mar. 27, 1877	876	266	11	522
Planter, Seed	W. Moores	193,268	July 17, 1877	738	226	12	128
Planter, Seed	H. J. Robinson	188,957	Mar. 27, 1877	1015	312	11	541
Planter, Seed	J. R. Sample	187,321	Feb. 13, 1877	406	128	11	269
Planter, Seed	J. Wafer	189,404	Apr. 10, 1877	399	127	11	619
Planter, Self-dropping corn	J. W. Perry	188,942	Mar. 27, 1877	996	305, 306	11	539
Planter, snlky-barrow, and cultivator, Combined seed.	S. B. Gilliland	186,826	Jan. 30, 1877	1024	317	11	181
Planter, Walking	J. B. Brown	196,517	Oct. 30, 1877	891	257	12	721
Planters, Check-row attachment for	G. D. Haworth	196,012	Oct. 9, 1877	333	95	12	616
Planters, Check-row attachment for	S. De Veaux	196,341	Oct. 23, 1877	699	201	12	683
Planters, Check-row attachment for corn	E. M. Wilcox	196,849	Nov. 6, 1877	115	34	12	777
Planters, Check-row attachment for corn	L. S. Woodside	193,743	July 31, 1877	1239	372	12	215
Planters, Check-row attachment for seed	G. D. Haworth	191,528	June 5, 1877	18	6	11	979
Planters, Check-rower for corn	R. Faries	187,610	Feb. 20, 1877	695	216	11	315
Planters, Dropping and marking attachment for corn	F., N., and P. Silsbee	189,581	Apr. 17, 1877	539	182	11	652
Planters, Dropping attachment for corn	J. Harvey	197,125	Nov. 13, 1877	414	122	12	828
Planters, Dropping attachment for corn	J. W. Oberholtzer and C. E. Wilcox.	195,528	Sept. 25, 1877	803	238	12	538
Planters, Marker for hand corn	B. Phelps	195,392	Sept. 18, 1877	657	195	12	509
Planters, Self dropper and marker for corn	M. Ackerman	198,261	Dec. 18, 1877	592	179	12	1046
Planting machinery, Seed	W. Gilman	190,486	May 8, 1877	391	114	11	805
Plaster casts, Mold for	J. Borden	193,917	Aug. 7, 1877	115	37	12	251
Plaster of paris, Hardening	A. B. and R. A. Kay	196,671	Oct. 30, 1877	1038		12	742
Plaster, Voltaic	W. B. Potter	187,310	Feb. 13, 1877	395	125	11	368
Plastering-hair bale	R. S. Craig	192,235	June 19, 1877	744	227	11	1091
Plastic compositions, Apparatus for mixing	A. Dietz	196,882	Nov. 6, 1877	154	45	12	781
Plate-lifter	W. Beattie	196,861	Nov. 6, 1877	127	38	12	779
Plated ware, Covered articles of	S. W. Babbitt	196,180	Oct. 16, 1877	521	151	12	650

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Platform: *See* Car-platform. Stove-platform. Non-conducting platform.							
Platform-spring	F. Kocher	197,866	Dec. 4, 1877	157	48	12	968
Pliers	H. R. Russell	188,262	Mar. 13, 1877	303	95	11	427
Pliers, Parallel	W. Quirk	188,408	Mar. 13, 1877	452	140	11	448
Plotting instrument	H. Wadsworth	194,486	Aug. 21, 1877	730	217	12	345
Plotting-table, Engineer's	A. R. Crandall	193,398	July 24, 1877	883	270	12	156
Plow	C. Atkinson	189,912	Apr. 24, 1877	939	287	11	705
Plow	J. M. Bassett	197,006	Nov. 13, 1877	286	85	12	809
Plow	M. M. Beard and G. W. Purcell	190,538	May 8, 1877	440	129	11	811
Plow	G. Black	187,249	Feb. 13, 1877	331	106	11	259
Plow	T. A. Blanchard	196,184	Oct. 16, 1877	524	152	12	650
Plow	J. D. Bowen	191,022	May 22, 1877	955	283	11	894
Plow	J. R. Caldwell and J. W. Herren	194,891	Sept. 4, 1877	131	41	12	419
Plow	B. F. Chandler	193,923	Aug. 7, 1877	121	38	12	251
Plow	G. B. Clarke	190,826	May 15, 1877	741	219	11	859
Plow	W. Clore	189,607	Apr. 17, 1877	613	190	11	655
Plow	R. Coreth	196,744	Nov. 6, 1877	7	2	12	761
Plow	W. A. Cowley	197,340	Nov. 20, 1877	648	191	12	870
Plow	W. W. Dawson	198,002	Dec. 11, 1877	303	93	12	998
Plow	W. L. Edwards	190,016	Apr. 24, 1877	1047	319	11	719
Plow	A. B. Farquhar	188,732	Mar. 27, 1877	781	240	11	510
Plow	D. P. Ferguson	189,443	Apr. 10, 1877	435	137	11	623
Plow	J. C. Ferguson	195,811	Oct. 2, 1877	117	34	12	578
Plow	J. Finnegan	197,623	Nov. 27, 1877	953	283	12	923
Plow	E. D. French	188,568	Mar. 20, 1877	560	172	11	470
Plow	H. Gale	189,722	Apr. 17, 1877	724	223	11	669
Plow	J. Hartmann	194,428	Aug. 21, 1877	671	200	12	337
Plow	J. W. Hendley	186,130	Jan. 9, 1877	314	96	11	58
Plow	S. Huber	186,088	Jan. 9, 1877	274	83	11	53
Plow	J. R. Jackson	190,593	May 8, 1877	492	146	11	819
Plow	J. C. Jenkins	189,466	Apr. 10, 1877	457	144	11	626
Plow	T. B. Jones	194,553	Aug. 28, 1877	803	239	12	365
Plow	I. R. Kern	188,018	Mar. 6, 1877	59	17	11	388
Plow	T. B. Kersh	187,763	Feb. 27, 1877	861	268	11	345
Plow	S. A. Knox	198,028	Dec. 11, 1877	324	100	12	1002
Plow	A. Lauer and J. Hartmann	190,500	May 8, 1877	406	118	11	807
Plow	W. S. Lawrence	188,019	Mar. 6, 1877	60	18	11	388
Plow	W. S. Lawrence	190,026	Oct. 9, 1877	350	100	12	618
Plow	W. S. Lawrence	191,446	May 29, 1877	1362	412	11	958
Plow	L. W. Liles	191,688	June 5, 1877	168	52	11	999
Plow	J. M. Looker	189,636	Aug. 17, 1877	638	198	11	658
Plow	E. G. Matthews	187,160	Feb. 6, 1877	228	75	11	234
Plow	J. F. Mead	193,983	Aug. 7, 1877	185	56	12	259
Plow	P. G. Miller	188,166	Mar. 6, 1877	200	62	11	407
Plow	T. M. Moore	186,601	Jan. 23, 1877	802	247	11	141
Plow	J. Nourse	194,257	Aug. 14, 1877	484	146	12	306
Plow	J. Oliver	185,833	Jan. 2, 1877	19	6	11	11
Plow	J. A. Olson	190,070	Apr. 24, 1877	1108	337	11	727
Plow	H. Opp	190,779	May 15, 1877	701	207	11	853
Plow	A. G. Perry	197,660	Nov. 27, 1877	984	294	12	928
Plow	G. W. Peterson	188,176	Mar. 6, 1877	209	65	11	408
Plow	O. F. Phillips	195,303	Sept. 18, 1877	577	168	12	497
Plow	J. J. Piatt	195,642	Sept. 25, 1877	909	270	12	553
Plow	J. Posey	197,494	Nov. 27, 1877	816	243	12	904
Plow	J. Preston	189,136	Apr. 3, 1877	106	38	11	573
Plow	J. Reich	189,496	Apr. 10, 1877	484	153	11	629
Plow	S. G. Reynolds	190,904	May 15, 1877	815	240	11	868
Plow	J. and M. Rich	196,934	Nov. 6, 1877	208	61	12	789
Plow	F. Rick	191,469	May 29, 1877	1385	418	11	961
Plow	J. Ruch	187,320	Feb. 13, 1877	405	128	11	269
Plow	J. Seaman	195,406	Sept. 18, 1877	671	198 199	12	511
Plow	F. E. Sessions	196,048	Oct. 9, 1877	371	105	12	621
Plow	J. T. Speer	195,668	Sept. 25, 1877	934	278	12	557
Plow	J. W. Thom	191,267	May 29, 1877	1202	361	11	933
Plow	R. B. Thomson	189,151	Apr. 3, 1877	121	43	11	575
Plow	W. M. Towers	190,932	May 15, 1877	842	249 250	11	872
Plow	W. M. Towers	197,691	Nov. 27, 1877	1010	302	12	932
Plow	M. Turley	196,774	Nov. 6, 1877	36	10	12	766
Plow	N. Whyte	194,231	Aug. 14, 1877	461	146	12	303
Plow	E. Wiard	188,555	Mar. 20, 1877	600	185	11	477
Plow	G. Wiard and C. W. Hough	189,885	Apr. 24, 1877	915	279	11	702
Plow	H. Wiard	197,918	Dec. 4, 1877	214	66	12	976
Plow	T. Wiard	187,950	Feb. 27, 1877	1048	323	11	370
Plow	J. F. and R. I. Wilson	189,981	Apr. 24, 1877	1003	307	11	714
Plow	J. W. Wood	193,102	July 17, 1877	576	174	12	106
Plow and corn-planter combined	J. T. Hughes	194,091	Aug. 14, 1877	311	92	12	283
Plow and cultivator, Gang	C. Domschke	198,193	Dec. 18, 1877	510	158	12	1035
Plow and cultivator, Shovel	T. H. Myers	194,713	Aug. 28, 1877	944	281	12	385
Plow and cultivator, Sulky	L. Wertenberger and G. W. Amiss	192,800	July 3, 1877	245	72	12	45
Plow attachment	D. W. Hughes	186,344	Jan. 16, 1877	541	164	11	94
Plow attachment	J. Redman	197,665	Nov. 27, 1877	988	295	12	929
Plow attachment for distributing fertilizers	W. P. Brown	196,190	Oct. 16, 1877	531	154	12	651
Plow attachment for potato-diggers	J. J. Dibel	187,460	Feb. 20, 1877	557	172	11	296
Plow-brightener	J. O. Minor and C. Woolverton	192,708	July 3, 1877	156	44	12	34
Plow-cleaning attachment	J. H. Storm	190,165	May 1, 1877	59	15	11	753
Plow-clearing attachment	J. F. Dock	189,087	Apr. 3, 1877	68	25	11	568
Plow-clevis	C. Robinson	188,413	Mar. 13, 1877	456	142	11	448
Plow-clevis	C. O. Wilder	191,629	June 5, 1877	110	34	11	991
Plow-clevis, Spring	J. F. Chase	198,275	Dec. 18, 1877	604	183	12	1048

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Plow, Colter	W. H. Collett	187,106	Feb. 6,1877	181	59	11	227
Plow-colter	C. R. Thompson	191,622	June 5,1877	104	32	11	990
Plow-colter or jointer-arm	F. R. Beal and S. Clark	197,448	Nov. 27,1877	769	229	12	897
Plow-colter or jointer-supporter	J. Oliver	190,510	May 8,1877	415	121	11	808
Plow-colters, Attaching	G. V. H. Whitbeck	194,116	Aug. 14,1877	356	105	12	188
Plow, Combined ditching, gang, and shovel	A. Pirch	191,880	June 12,1877	360	111	11	1029
Plow corn-guard	E. B. Murphy and C. D. Bramell	189,128	Apr. 3,1877	101	36	11	573
Plow-coupling in double shovels	C. W. Oneal	187,665	Feb. 20,1877	749	232	11	321
Plow, Cultivator	W. H. Bennett and H. R. Height	193,362	July 24,1877	851	261	12	151
Plow, Ditching	S. Furnas	194,865	Sept. 4,1877	108	34	12	415
Plow, Ditching	D. N. Maxwell	187,400	Feb. 13,1877	480	150	11	279
Plow-fender	J. B. Rubsam	194,374	Aug. 21,1877	614	184	12	330
Plow, Gang	H. H. Canaday	188,586	Mar. 20,1877	631	195	11	481
Plow, Gang	T. J. Crump	193,226	July 17,1877	692	212	12	122
Plow, Gang	J. R. Cummins	187,518	Feb. 20,1877	613	190	11	303
Plow, Gang	M. S. Curtiss	198,190	Dec. 18,1877	507	157	12	1034
Plow, Gang	W. Fruhling	186,335	Jan. 16,1877	530	160	11	93
Plow, Gang	D. M. Funk	195,498	Sept. 25,1877	776	228	12	533
Plow, Gang	M. D. Judkins	188,247	Mar. 13,1877	292	92	11	425
Plow, Gang	C. Mowrey	197,159	Nov. 13,1877	445	131	12	833
Plow, Gang	C. Mowrey	197,160	Nov. 13,1877	446	132	12	833
Plow, Gang	E. Peak	186,269	Jan. 16,1877	453	139	11	84
Plow, Gang	G. H. Wilson	190,460	May 8,1877	364	106	11	802
Plow, Garden	T. E. Smoot	194,007	Aug. 7,1877	210	62	12	262
Plow, Gopher gang	M. S. McMahan	187,032	Feb. 6,1877	112	37	11	217
Plow-handle tip	W. Weaver	187,684	Feb. 20,1877	763	237	11	323
Plow, harrow, and seeder combined	J. Hoffacker	196,899	Nov. 6,1877	169	49	12	784
Plow-hook, Reversible	J. A. Vann	194,276	Aug. 14,1877	507	153	12	308
Plow-jointer	J. Densmore	190,672	May 15,1877	598	177	11	840
Plow, Mold-board	B. K. Emerson	194,961	Sept. 11,1877	216	67	12	438
Plow mold-boards, Chill for casting	J. Oliver	189,874	Apr. 24,1877	903	276	11	700
Plow mold-boards, Manufacture of	C. Blair	189,179	Apr. 3,1877	142	51	11	578
Plow-point	W. A. Conaway	186,803	Jan. 30,1877	1000	311	11	177
Plow-point	A. L. McIntyre	187,659	Feb. 20,1877	743	230	11	321
Plow-point, Reversible	M. M. Bowers	197,086	Nov. 13,1877	375	110	12	822
Plow-point, Reversible	C. W. Jenkins	196,232	Oct. 16,1877	575	166	12	657
Plow, Reversible	J. Gogel	190,678	May 15,1877	603	179	11	840
Plow, Reversible	E. C. Hodgo	189,558	Apr. 17,1877	565	175	11	649
Plow, Revolving	H. Skilliugs	198,163	Dec. 11,1877	462	144	12	1022
Plow, Riding	J. L. Florance	193,152	July 17,1877	615	186	12	112
Plow, Riding	J. Kennedy	197,380	Nov. 20,1877	684	205	12	876
Plow, Rotary	W. Freeborn	191,332	May 29,1877	1257	379	11	944
Plow-shoe	M. H. Walker	188,701	Mar. 20,1877	742	228	11	496
Plow, Shovel	T. H. C. Dow	186,993	Feb. 6,1877	79	27	11	212
Plow, Steam	S. P. Goddard	198,601	Dec. 25,1877	920	280	12	1104
Plow-stock	N. J. Skaggs	190,092	Apr. 24,1877	1133	344	11	730
Plow-stock	R. Weber	186,284	Jan. 16,1877	463	143	11	86
Plow stock and sweep	J. S. and R. Bowling	194,407	Aug. 21,1877	645	194	12	334
Plow stubble-guard	B. F. Phillips	190,781	May 15,1877	703	207	11	853
Plow, Stump	W. Painter	192,930	July 10,1877	391	116	12	74
Plow, Subsoil	J. Jarrell	187,637	Feb. 20,1877	722	224	11	318
Plow, Sulky	H. H. Canaday	194,072	Aug. 14,1877	291	87	12	281
Plow, Sulky	H. E. Carver	188,856	Mar. 27,1877	916	278	11	528
Plow, Sulky	G. A. Ellis	195,494	Sept. 25,1877	771	226 / 227	12	532
Plow, Sulky	A. A. Fowler	191,667	June 5,1877	148	46	11	996
Plow, Sulky	H. Fuller and T. L. Boyd	186,673	Jan. 30,1877	876	271	11	160
Plow, Sulky	H. Fuller and T. L. Boyd	198,100	Dec. 11,1877	392	123	12	1012
Plow, Sulky	A. H. Gale	193,941	Aug. 7,1877	142	43	12	254
Plow, Sulky	J. F. Glidden and P. W. Vaughan	195,119	Sept. 11,1877	378	114	12	461
Plow, Sulky	O. D. Hall	188,797	Mar. 27,1877	858	261	11	519
Plow, Sulky	J. Hamaker	198,017	Dec. 11,1877	316	97	12	1001
Plow, Sulky	J. F. Hammontree	187,132	Feb. 6,1877	204	67	11	230
Plow, Sulky	W. Henry	191,588	June 5,1877	72	22	11	986
Plow, Sulky	F. A. Hill	191,342	May 29,1877	1264	381	11	915
Plow, Sulky	W. B. Newman	186,867	Jan. 30,1877	1072	331	11	186
Plow, Sulky	W. T. Orr	194,258	Aug. 14,1877	485	146	12	306
Plow, Sulky	J. M. Payne	195,389	Sept. 18,1877	651	194	12	508
Plow, Sulky	S. Pennock	194,167	Aug. 14,1877	404	120	12	294
Plow, Sulky	J. E. Porter	192,279	June 19,1877	792	241	11	1097
Plow, Sulky	R. A. Renfro	194,619	Aug. 28,1877	859	256	12	373
Plow, Sulky	W. N. Riddle	187,560	Feb. 20,1877	646	201	11	308
Plow, Sulky	H. J. Schmeiser	158,972	Jan. 2,1877	158	49	11	29
Plow, Sulky	G. H. Smith	193,899	Aug. 7,1877	97	31	12	248
Plow, Sulky	W. S. Weir	190,652	May 8,1877	560	166 / 167	11	827
Plow, Sulky and gang	J. H. Goodwin and D. Woodard	195,001	Sept. 11,1877	254	77	12	443
Plow sulky attachment	W. K. Bushnell	190,737	May 15,1877	664	197	11	848
Plow sulky attachment	W. K. and D. Bushnell	195,977	Oct. 9,1877	300	84	12	611
Plow, Swivel	J. Hartmann	198,611	Dec. 25,1877	933	284	12	1105
Plow, Tongueless	W. F., A. B., and M. T. Reeves	187,983	Mar. 6,1877	27	7	11	384
Plow, Weeding	J. Coles	193,225	July 17,1877	692	211	12	122
Plow, Wheel	A. A. Amonett	192,142	June 19,1877	646	198	11	1078
Plow, Wheel	T. Bruner	194,029	Aug. 14,1877	249	74	12	275
Plow, Wheel	L. Chapman	194,803	Sept. 4,1877	50	16,17	12	407
Plow, Wheel	F. S. Davenport	185,821	Jan. 2,1877	8	3	11	10
Plow, Wheel	S. M. Harris	195,272	Sept. 18,1877	549	160	12	493
Plows, Axle for sulky and gang	B. C. Bradley	186,409	Jan. 23,1877	622	190	11	117
Plows, Machine for bending frog-plates for	T. Meikle	195,627	Sept. 25,1877	893	265	12	550
Plows, Riding attachment for	J. Bailey and G. Marshall	198,068	Dec. 11,1877	361	112	12	1008
Plows, Rotary cutter and shield for	W. H. Mellon	196,160	Oct. 16,1877	500	146	12	647
Plows, Sand mold for	G. W. Yeargin and T. L. Wells	197,922	Dec. 4,1877	218	67	12	977
Plows, Weed-folding attachment for	T. M. Harbert	195,760	Oct. 2,1877	67	20	12	570

Alphabetical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Plowshare	R. Smith	195,200	Sept. 11, 1877	460	137	12	473
Plowshares and points, Device for sharpening	F. M. Marquis	188,390	Mar. 13, 1877	437	136	11	445
Plowshares, Manufacture of	C. H. Thompson	189,150	Apr. 3, 1877	120	43	11	575
Plumber's trap	L. Schoenberg	187,182	Feb. 6, 1877	247	81	11	236
Plumbers' traps, Machine for making	J. Robertson	192,192	June 19, 1877	697	213, 214	11	1085
Plush and cloth, Cleaning	J. Besanson	195,334	Sept. 18, 1877	605		12	501
Pneumatic engine	J. F. Allen	193,631	July 31, 1877	1134	340	12	200
Pneumatic signal	F. Boyd	193,474	July 24, 1877	954	290	12	166
Pneumatic signal apparatus	A. N. Towne	189,969	Apr. 24, 1877	991	303	11	712
Pocket-book	D. M. Read	192,714	July 3, 1877	160	46	12	35
Pocket-book	W. Wilkinson	187,499	Feb. 20, 1877	596	185	11	301
Pocket-book and revolver combined	O. Frankenau	196,794	Nov. 6, 1877	56	17	12	768
Pocket-book clasp	S. F. Clement	188,589	Mar. 20, 1877	633	195	11	481
Pocket-book clasp	L. Prahar	197,563	Nov. 27, 1877	888	264	12	914
Pocket-book fastener	J. H. Jantzen	187,760	Feb. 27, 1877	859	267	11	345
Pocket-book fastening	D. M. Read	198,043	Dec. 11, 1877	338	105	12	1004
Pocket-book frame	T. Schimper	187,779	Feb. 27, 1877	882	274	11	348
Pocket-book lock	E. Suhr	194,188	Aug. 14, 1877	422	127	12	297
Pocket-book lock	F. F. Weiss	186,510	Jan. 23, 1877	712	219	11	129
Pocket-book safety attachment	T. Ferguson	190,751	May 15, 1877	677	201	11	850
Pocket-books, &c., Handle-fastening for	H. Hopfensack	195,132	Sept. 11, 1877	391	117	12	463
Pocket-knife	F. Booker	188,231	Mar. 13, 1877	279	87	11	424
Pocket-knife	W. R. Rightor	187,483	Feb. 20, 1877	580	179	11	299
Pocket-knife	S. Scholfield	187,051	Feb. 6, 1877	129	42	11	220
Pocket-knife blades, &c., Combined handle and sheath for.	D. Manuel and W. Whitehouse	191,063	May 22, 1877	991	294	11	899
Pocket-protector	J. Koebler	198,545	Dec. 25, 1877	870	265	12	1096
Pocket, Safety	W. M. Blume	192,732	July 3, 1877	173	50	12	37
Pocket, Safety	B. Nunamacker	197,882	Dec. 4, 1877	174	53	12	971
Pocket, Safety	F. Wendt	190,799	May 15, 1877	715	212	11	855
Pocket safety attachment	M. Von Gerichten	188,993	Mar. 27, 1877	1046	322	11	546
Poke, Animal	R. E. Atteberry	189,169	Apr. 3, 1877	134	48	11	577
Poke, Animal	B. D. Watson	189,158	Apr. 3, 1877	127	45	11	576
Pole and shaft combined	W. H. Hiteshero	186,086	Jan. 9, 1877	272	82	11	53
Pole tip, Carriage	G. W. Hobbs	194,910	Sept. 4, 1877	151	47	12	421
Pole tip, Vehicle	B. Foltz	192,159	June 19, 1877	666	204	11	1081
Poles, Extension bow-iron for carriage	C. K. Mellinger	193,263	July 17, 1877	733	224	12	127
Polishing machine, Stove and glass	A. Vogeley	189,817	Apr. 17, 1877	820	253	11	681
Pomade	M. Culberton	188,286	Mar. 13, 1877	327		11	430
Portable and traction engine	N. M. Davidson	188,866	Mar. 27, 1877	926	282	11	529
Portable engine	J. Richardson	185,966	Jan. 2, 1877	154	47	11	28
Portable engine carriage	C. M. Miller	189,248	Apr. 3, 1877	217	73	11	587
Portable engine, Vertical	J. S. Schofield	187,917	Feb. 27, 1877	1019	314	11	366
Portable engines, Mounting for	R. M. Beck	187,348	Feb. 13, 1877	429	135	11	272
Portable fountain	W. H. Zinn	191,557	June 5, 1877	47	14	11	982
Portable furnace for thawing leaders	W. R. Ostrander	188,662	Mar. 20, 1877	706	216	11	491
Portable furnace-stand	J. N. Muller	194,101	Aug. 14, 1877	319	94	12	284
Portable heater	G. L. Thorne	197,749	Dec. 4, 1877	44	14	12	952
Portable heater	M. Waterbury	186,911	Jan. 30, 1877	1111	343	11	191
Portraits, Machine for incasing pocket	J. R. Applegate	189,167	Apr. 3, 1877	133	48	11	577
Post: *See* Fence-post. Lamp-post. Hitching-post.							
Post and pile driver	W. A. Newton	188,066	Mar. 6, 1877	105	32	11	395
Post-driver	W. Kindermann	192,173	June 19, 1877	677	207	11	1082
Post-driver	M. Vanosdol	192,036	June 12, 1877	521	161	11	1050
Post-hole digger	J. J. Armstrong	197,308	Nov. 20, 1877	610	180	12	864
Post-hole digger	J. A. Cluxton	196,195	Oct. 16, 1877	535	155	12	652
Post-hole digger	T. S. Disston	191,320	May 29, 1877	1247	375	11	943
Post-office box	B. H. and W. H. Camp	194,890	Sept. 4, 1877	130	40, 41	12	418
Post-office box	J. B. Harlow	188,512	Mar. 20, 1877	564	174	11	471
Postal card	C. K. Marshall	193,012	July 10, 1877	466	141	12	84
Postal card, Double	C. A. L. Totten	198,322	Dec. 18, 1877	640	195	12	1054
Postal circular	J. Chapman	186,001	Jan. 9, 1877	194	59	11	43
Postmarking and canceling machine	T. Leavitt	192,519	June 26, 1877	1056	317, 318	11	1143
Pot: *See* Coffee-pot. Plant-pot. Fire-pot. Slag-pot. Flower-pot. Tea-pot. Glass pot. Tea and coffee pot. Glass-melting pot.							
Pot and kettle cover	J. H. Beauregard and J. Wroath	197,591	Nov. 27, 1877	917	274	12	919
Potato-bug catcher	J. F. Corbin and M. W. Moseley	194,862	Sept. 4, 1877	106	33	12	415
Potato-bug catcher	L. S. Munroe	195,835	Oct. 2, 1877	140	40	12	581
Potato-bug destroyer	J. Jacobsen	195,014	Sept. 11, 1877	270	82	12	445
Potato-bug gatherer	H. Charles, jr	196,876	Nov. 6, 1877	147	44	12	781
Potato-bug-poison syringe	G. T. Wisner	193,742	July 31, 1877	1239	372	12	215
Potato-bug trap	S. Hartwell	194,429	Aug. 21, 1877	672	201	12	337
Potato cutter and dropper and corn planter	Z. J. White	192,316	June 19, 1877	840	255	11	1103
Potato-digger	L. A. Aspinwall	189,911	Apr. 24, 1877	938	286, 287	11	705
Potato-digger	J. H. Bennitt	197,449	Nov. 27, 1877	769	229	12	897
Potato-digger	M. Dargitz	191,409	May 29, 1877	1321	401	11	953
Potato-digger	D. M. King	190,971	May 22, 1877	901	267	11	887
Potato-digger	J. P. Manll	189,568	Apr. 17, 1877	575	178	11	650
Potato-digger	H. Moore	196,760	Nov. 6, 1877	24	7	12	764
Potato-digger	J. Norton	193,542	July 24, 1877	1026	308	12	175
Potato-digger	A. J. Robertson	192,013	June 12, 1877	495	152	11	1046
Potato digger, marker, and cultivator	G. S. Pickett	187,772	Feb. 27, 1877	871	271	11	346
Potato drill and planter	J. M. Spickler	197,908	Dec. 4, 1877	201	61	12	975
Potato vines, Apparatus for sprinkling liquid poison on.	J. Williams	188,487	Mar. 20, 1877	540	166	11	468

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Potato-vines, Machine for removing bugs from	J. M. Conrad	191,936	June 12, 1877	414	128	11	1036
Pottery, Machinery for manufacture of	R. Gracey	192,823	July 10, 1877	294	86	12	60
Pottery-ware in kilns, Thimble-pin for supporting	E. Leak	186,585	Jan. 23, 1877	788	243	11	139
Poultice	H. E. Canty	186,540	Jan. 23, 1877	744	228	11	133
Powder: *See* Compensating-powder. Flavoring-powder. Metallic powder. Mining-powder. Molder's facing-powder. Sedlitz-powder. Toilet washing-powder.							
Powder-distributing apparatus	J. J. Cassidy	197,601	Nov. 27, 1877	926	276	12	920
Powder-flask	J. Covode	192,977	July 10, 1877	436	131	12	80
Power: *See* Churn-power. Eccentric power. Foot-power. Horse-power. Motive power. Tide-power. Water-power.							
Power, Apparatus for transmission of	C. C. Webber	187,206	Feb. 6, 1877	267	87	11	238
Preserving animal and vegetable matter, Composition for.	J. A. Kohrssen	187,644	Feb. 20, 1877	732		11	319
Preserving animal and vegetable substance	F. S. Barff	188,093	Mar. 6, 1877	125		11	397
Preserving apples	J. Walker	193,788	July 31, 1877	1292		12	292
Preserving composition	C. G. Am Ende	187,956	Mar. 6, 1877	1		11	381
Preserving, drying, and bleaching fruit, Composition for.	J. R. Dodge, jr	191,661	June 5, 1877	143		11	995
Preserving flesh	J. L. Alberger	194,569	Aug. 28, 1877	817	243	12	366
Preserving flesh and fish by salicylic acid	J. Eckart	194,550	Aug. 28, 1877	801	238	12	364
Preserving food	J. Harvey	193,509	July 24, 1877	990		12	171
Preserving food, Composition for	C. G. Am Ende	187,079	Feb. 6, 1877	154		11	224
Preserving fruit	J. L. Burst, jr., and C. M. D'Autrey.	190,415	May 8, 1877	319	93	11	796
Preserving vegetables, &c	G. L. Merrell and O. F. Soule	188,395	Mar. 13, 1877	441	137	11	446
Press: *See* Baling-press. Butter-press. Cheese-press. Cider-press. Cider and wine press. Copying-press. Corn-ball press. Corn-stalk press. Cotton-press. Drop-press. Embossing-press. Filter-press. Fruit-press. Ginger-snap press. Hay-press. Hay and cotton press. Hop-press. Household press. Hydraulic-press. Lard-press. Metal-drawing press. Oil-press. Printing-press. Sealing-press. Shoe-press. Stencil copying-press. Tobacco-press. Tobacco and cotton press.							
Pressure-gage	B. M. Johnson	192,373	June 26, 1877	912	274	11	1125
Pressure-gage	T. Shaw	187,053	Feb. 6, 1877	130	43	11	220
Pressure-gage	W. T. Snyder	190,790	May 15, 1877	710	210	11	854
Pressure-jack, Hydraulic	S. A. Alexander	198,176	Dec. 18, 1877	491	153	12	1033
Pressure-regulator	G. H. Wood	193,629	July 31, 1877	1132	339	12	200
Price and show cards, Device for attaching	H. Bornstein	194,405	Aug. 21, 1877	642	193	12	334
Printed fabrics, Apparatus for steaming and aging	W. Mather	189,371	Apr. 10, 1877	365	118	11	614
Printed paper, Buffing or take-off roll for finishing	A. D. Poole	188,670	Mar. 20, 1877	713	218	11	492
Printed sheets of paper, Machine for finishing	J. Morris	196,692	Oct. 30, 1877	1057	307	12	744
Printed textile fabric	H. D. Dupee	192,492	June 26, 1877	1024		11	1140
Printer's bodkin	W. Chester	188,777	Mar. 27, 1877	836	254	11	517
Printer's lead-shaving machine	C. G. and O. N. Blomgren, and S. A. Hawkinson.	193,315	July 24, 1877	807	248	12	145
Printer's inking-roll, Composition for	J. Clifford	191,933	June 12, 1877	411		11	1036
Printer's rolls, Renovating	B. F. Allen	188,765	Mar. 27, 1877	813		11	514
Printer's rule	T. S. Bowman	188,232	Mar. 13, 1877	280	87	11	421
Printing and perforating machine, Rotary	G. P. Drummond	198,239	Dec. 18, 1877	569	173	12	1043
Printing and recording cash receipts, Device for	J. H. Smith and J. Mors	188,310	Mar. 13, 1877	350	110, 111	11	433
Printing and recording device, Ticket	B. C. Polo	191,254	May 29, 1877	1188	357	11	935
Printing, Blanket for calico	C. McBurney	189,868	Apr. 24, 1877	894	273	11	699
Printing-blocks, Mold for solid-color	C. H. O. Radde	187,729	Feb. 27, 1877	829	258	11	341
Printing, Damping-roller for lithographic	W. H. Woodcock	189,828	Apr. 17, 1877	828	256	11	682
Printing-machine and folding apparatus combined, Duplex.	E. L. Ford	195,115	Sept. 11, 1877	373	112, 113	12	460
Printing-machine delivering apparatus	S. D. Tucker	196,502	Oct. 23, 1877	857	246, 247, 248	12	705
Printing-machine delivery apparatus	R. M. Hoe and S. D. Tucker	192,510	June 26, 1877	1043	314, 315	11	1142
Printing-machine delivery apparatus	S. D. Tucker	192,954	July 10, 1877	415	124, 125	12	77
Printing-machine delivery apparatus	S. D. Tucker	193,056	July 10, 1877	512	154	12	90
Printing-machine delivery mechanism	S. D. Tucker	191,494	May 29, 1877	1413	426, 427, 428, 429	11	964
Printing-machine for printing on boards, Rotary	H. Montgomery	193,538	July 24, 1877	1021	307	12	174
Printing, Machine for shaping solid colors for	C. H. O. Radde	189,654	Apr. 17, 1877	658	204	11	660
Printing-machine, Rotary	W. J. Ingram	194,152	Aug. 14, 1877	389	115, 116	12	293
Printing-machine Rotary	W. F. Widmayer	198,479	Dec. 25, 1877	808	244, 245, 246	12	1087
Printing-machine, Rotary	W. F. Widmayer	198,502	Dec. 25, 1877	832	252, 253	12	1090

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Printing-machine sheet-delivering apparatus	S. D. Tucker	197,693	Nov. 27, 1877	1012	302, 303, 304, 305, 306	12	933
Printing-machine sheet-delivering apparatus	S. D. Tucker	197,694	Nov. 27, 1877	1023	306, 307, 308	12	933
Printing-machine sheet-delivering apparatus	S. D. Tucker	197,700	Nov. 27, 1877	1034	311, 312	12	934
Printing machine, Spool	E. Allen	188,223	Mar. 13, 1877	271	85	11	423
Printing machine, Spool	C. M. Chase and A. C. Gould	197,331	Nov. 20, 1877	638	188	12	868
Printing machine, Yarn	C. W. Gilcert	188,044	Mar. 6, 1877	89	26	11	392
Printing machines, Tension regulator for calico	J. Haworth	196,266	Oct. 23, 1877	653	189	12	677
Printing on glass, porcelain, &c., Machine for	F. W. Heuer	194,350	Aug. 21, 1877	596	178	12	327
Printing-press	E. Beech	186,785	Jan. 30, 1877	978	305	11	175
Printing-press	E. Beech	186,786	Jan. 30, 1877	981	305, 306	11	175
Printing-press	J. E. Braunsdorf and C. Kaiser	187,806	Feb. 27, 1877	905	281, 282	11	351
Printing-press	E. Dummer	197,021	Nov. 13, 1877	300	89	12	811
Printing-press	F. W. Griffith and G. P. Byrne	189,556	Apr. 17, 1877	561	175	11	648
Printing-press	F. W. Griffith, G. P. Pyrne, and A. Shedlock.	189,728	Apr. 17, 1877	732	225	11	670
Printing-press	W. A. Harp	192,256	June 19, 1877	770	234	11	1095
Printing-press	W. C. Kritch and A. Greenwood	188,151	Mar. 6, 1877	183	56, 57	11	405
Printing-press	J. O. Kurtzmann	190,025	Oct. 9, 1877	348	99	12	618
Printing-press	C. Potter, jr	191,289	May 29, 1877	1224	367	11	939
Printing-press	C. H. O. Radde	187,730	Feb. 27, 1877	829	258, 259	11	341
Printing-press	J. Wade	189,532	Apr. 10, 1877	518	163, 164	11	634
Printing-press	W. H. Woodcock	189,829	Apr. 17, 1877	829	256, 257	11	682
Printing-press feed-guide	D. Weckerlin	197,305	Nov. 20, 1877	607	180	12	864
Printing-press ink-fountain	A. Campbell	194,218	Aug. 14, 1877	446	136	12	301
Printing-press inking apparatus	F. Macdonald	188,386	Mar. 13, 1877	433	134	11	444
Printing-press inking apparatus	H. R. Winn	194,065	Aug. 14, 1877	285	85	12	280
Printing press, Lithographic	C. C. Maurice	191,696	June 5, 1877	175	54, 55	11	1000
Printing-press, Oscillating	G. P. Appleton	196,512	Oct. 23, 1877	870	251	12	706
Printing-press perforator	J. A. Carruth	193,482	July 24, 1877	962	292	12	167
Printing press, Plate	H. W. Browne	190,188	May 1, 1877	77	21	11	756
Printing press, Plate	J. Lister	197,873	Dec. 4, 1877	166	50	12	969
Printing press, Plate	J. Milligan	193,097	July 17, 1877	569	172	12	105
Printing-press, Rotary	M. Hainque	194,902	Sept. 4, 1877	144	45	12	420
Printing-press, Rotary	J. R. Rankin	193,995	Aug. 9, 1877	195	59	12	261
Printing-presses, Automatic receiving-table for	M. D. Wilkins	195,427	Sept. 18, 1877	693	205	12	514
Printing-presses, Rotary fly for	W. F. Widmayer	194,022	Aug. 7, 1877	225	67	12	264
Printing roller, Calico	J. Hope	196,149	Oct. 16, 1877	492	143	12	646
Printing-rolls, Method of making	J. Waldron	188,320	Mar. 13, 1877	364	114	11	435
Printing-surfaces for reading-matter, Machine for obtaining.	G. P. Drummond	198,238	Dec. 18, 1877	565	172	12	1043
Printing-surfaces for reading-matter, Machine for obtaining.	G. P. Drummond	198,240	Dec. 18, 1877	571	173	12	1043
Printing-surfaces, Process and apparatus for producing.	G. P. Drummond	198,237	Dec. 18, 1877	556	171, 172	12	1042
Printing textile fabrics, Machine for	W. Ireland	188,370	Mar. 13, 1877	415	129	11	442
Privy-seat	R. A. Van Court	188,699	Mar. 20, 1877	740	227	11	495
Privy-vaults, Apparatus for excavating	A. Ames, jr	192,212	June 19, 1877	717	220	11	1088
Projectile	C. E. Ball	187,746	Feb. 27, 1877	846	264	11	343
Projectile	B. B. Hotchkiss	193,657	July 31, 1877	1168	350	12	205
Projectile	D. Kennedy	189,043	Apr. 3, 1877	30	10	11	563
Projectile for smooth-bore cannon	J. R. N. Owen	195,040	Sept. 11, 1877	297	90	12	448
Projectile, Rope or line carrying	T. C. Backus	192,670	July 3, 1877	126	34	12	20
Propeller, Canal-boat	J. Tascher	193,196	July 17, 1877	655	200	12	117
Propeller, Endless-chain	W. J. Carroll	192,563	July 3, 1877	8	3	12	13
Propeller for steam-vessels	W. G. Ketchum	187,535	Feb. 20, 1877	625	194	11	305
Propeller for vessels, Chain	W. B. Whiting	187,948	Feb. 27, 1877	1046	322	11	369
Propeller, Screw	A. de Beaumont	188,106	Mar. 6, 1877	137	41	11	399
Propeller, Screw	W. S. Hull	187,633	Feb. 20, 1877	719	223	11	318
Propeller, Screw	M. D. Nelon	193,989	Aug. 7, 1877	190	57	12	260
Propeller, Screw	W. W. Shoe	198,052	Dec. 11, 1877	345	108	12	1005
Propeller, Screw	W. D. Smith	197,419	Nov. 20, 1877	724	215	12	882
Propeller, Screw	W. F. Tyson	187,941	Feb. 27, 1877	1040	320	11	368
Propeller, Screw	J. W. Whittaker	197,437	Nov. 20, 1877	741	221	12	885
Propeller, Steering	J. H. Carpenter	189,603	Apr. 17, 1877	608	188, 189	11	654
Propeller, Steering	W. W. Shoe	198,053	Dec. 11, 1877	346	108	12	1006
Propeller, Steering	C. Uller and J. N. Bennett	189,972	Apr. 24, 1877	995	304	11	713
Propeller, Vessel	F. Morris	188,398	Mar. 13, 1877	444	137	11	446
Propeller, Vibrating	S. Marden	196,240	Oct. 16, 1877	583	168	12	658
Propellers, Adjustable guard for screw	A. Marschall	191,007	May 22, 1877	940	278	11	892
Propelling and dry-dock attachment for vessels	J. Curtis	198,000	Dec. 11, 1877	301	92	12	998
Propelling canal-boats	J. H. Hetzler	193,511	July 24, 1877	993	300	12	171
Propelling canal-boats	B. H. Muehle	190,975	May 22, 1877	905	268	11	888
Propelling canal-boats	N. M. Tobey	192,606	July 3, 1877	51	15	12	19
Propelling vessels	S. H. Cowles	198,082	Dec. 11, 1877	375	117	12	1010
Propelling vessels	T. H. Rawlins	186,691	Jan. 30, 1877	894	276	11	163
Propelling vessels, Device for	W. F. Morrison	194,835	Sept. 4, 1877	78	26	12	411
Propelling vessels, Wind motor for	M. Harris	196,448	Oct. 23, 1877	795	229	12	697
Propelling-wheel for vessels, Buoyant	L. Brown	196,136	Oct. 16, 1877	480	139	12	644
Propulsion of vessels	T. S. Scabury	191,475	May 29, 1877	1390	419	11	961

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Protector: *See* Book-cover protector. Boot and shoe heel protector. Bottle-protector. Cow's bag protector. Floor-protector. Knee protector. Pantaloons-protector. Pen-holding pencil-point protector. Plant and tree protector. Ribbon-protector. Shirt bosom and collar protector. Stocking-protector. Tree-protector. Vehicle dress-protector. Wagon-protector. Water-closet protector.							
Protractor	R. T. Osgood	190,611	May 8, 1877	509	151	11	821
Pruner and fruit-picker	A. L. Bevans	190,267	May 1, 1877	153	45	11	766
Pruning-hook	W. L. Shaw	197,415	Nov. 20, 1877	719	214	12	881
Pruning implement	J. Chase	189,921	Apr. 24, 1877	947	289	11	706
Pruning implement	J. Hoak	196,359	Oct. 23, 1877	715	206	12	685
Pruning implement	J. R. Hunter	192,434	June 26, 1877	969	291	11	1133
Pruning-shears	P. Davison	195,101	Sept. 11, 1877	359	108	12	457
Pruning-shears	C. Lloyd	195,828	Oct. 2, 1877	134	38	12	580
Pruning-shears	H. T. White	190,173	May 1, 1877	64	17	11	754
Pruning shears and saw combined	T. S. Disston	188,604	Mar. 20, 1877	645	199	11	483
Puddler's balls, Machine for squeezing	E. Suckow	190,385	May 1, 1877	269	79, 80	11	781
Puddling-furnace, Rotary	J. I. Williams	188,488	Mar. 20, 1877	540	166, 167	11	468
Puller: *See* Skewer-puller. Spike-puller. Stump-puller.							
Pulley	M., H., and D. Block	192,050	June 19, 1877	558	170	11	1067
Pulley and shaft connection	R. H. St. John	187,929	Feb. 27, 1877	1031	317	11	367
Pulley attachment for gaffs	H. Loud	198,636	Dec. 25, 1877	959	292	12	1109
Pulley, Band	C. R. Bushnell	192,562	July 3, 1877	7	3	12	13
Pulley-block	A. Bischoff	194,326	Aug. 21, 1877	572	171	12	324
Pulley-block	C. B. Bristol	196,187	Oct. 16, 1877	527	153	12	651
Pulley-block	J. Manning	197,152	Nov. 13, 1877	439	129	12	832
Pulley-block	E. Y. Moore	198,247	Dec. 18, 1877	581	176	12	1045
Pulley-block	J. L. Pope	191,814	June 12, 1877	297	92	11	1021
Pulley-block	J. Strubel	188,314	Mar. 13, 1877	357	112	11	434
Pulley-block	E. R. Wetherell	198,527	Dec. 25, 1877	855	260	12	1094
Pulley-block, Metal	E. U. and W. L. Scoville	192,881	July 10, 1877	350	103	12	67
Pulley-block sheave	A. M. Smith	194,478	Aug. 21, 1877	723	215	12	344
Pulley-blocks, Anti-frictional sheave for	J. Edson and W. H. Haynes	197,769	Dec. 4, 1877	64	21	12	955
Pulley-blocks, Differential chain for	B. Arnold	187,745	Feb. 27, 1877	845	263	11	343
Pulley-cover material	W. R. Norris	193,273	July 17, 1877	745	228	12	129
Pulley, Counter-shaft	G. Soger	196,772	Nov. 6, 1877	34	10	12	765
Pulley for machine-belts	A. Streit	195,672	Sept. 25, 1877	937	279	12	557
Pulley for ropes and bands, Guide	G. H. Reynolds	196,250	Oct. 16, 1877	593	172	12	660
Pulleys, Belt-shipping attachment for	R. Denmark	186,318	Jan. 16, 1877	498	152	11	90
Pulleys, Casting	G. G. Lobdell	191,690	June 5, 1877	170	53	11	999
Pulleys, Casting grooved	W. W. Lobdell	191,981	June 12, 1877	463	142	11	1042
Pulleys, Casting grooved	W. W. Lobdell	191,983	June 12, 1877	464	143	11	1042
Pulleys, Device for throwing belts on	R. Reinhard	189,263	Apr. 3, 1877	231	67	11	589
Pulleys, Molding	H. and P. Nadig	195,036	Sept. 11, 1877	292	89	12	448
Pulp-engine	S. L. Gould	196,751	Nov. 6, 1877	15	4	12	762
Pulp-engine	E. Sumner	191,898	June 12, 1877	378	116, 117	11	1031
Pulp, Mold or die for forming articles of	D. Scrymgeour	191,551	June 5, 1877	43	12	11	982
Pulp or paper stock from wood, Apparatus for making	M. R. Fletcher	196,515	Oct. 23, 1877	873	252	12	707
Pulverizer and cultivator, Circular-toothed	J. M. Ludlow and S. C. Pruitt	197,784	Dec. 4, 1877	81	25	12	957
Pulverizing-machine	A. B. Lipsey	186,401	Jan. 16, 1877	602	185	11	102
Pulverizing-machine, Feeding-hopper for	E. S. Blake	187,588	Feb. 20, 1877	673	209	11	312
Pulverizing-mill	I. M. Phelps	196,039	Oct. 9, 1877	362	103	12	620
Pulverizing-mill roll	E. S. Blake	189,887	Apr. 24, 1877	917	280	11	702
Pump	J. S. Adams	185,813	Jan. 2, 1877	1	1	11	9
Pump	W. Ault	186,097	Jan. 9, 1877	285	86	11	55
Pump	R. P. Cammack and C. A. Ray	193,689	July 31, 1877	1196	358	12	209
Pump	J. W. Collins	193,145	July 17, 1877	610	185	12	111
Pump	M. Cook	189,924	Apr. 24, 1877	951	291	11	707
Pump	W. S. Davis	189,306	Apr. 10, 1877	305	96	11	606
Pump	J. F. and W. W. Furnas	191,044	May 22, 1877	974	289	11	897
Pump	J. Harman	187,009	Feb. 6, 1877	93	31, 32	11	214
Pump	G. W. Holmes	187,852	Feb. 27, 1877	955	296	11	357
Pump	B. J. C. Howe	187,531	Feb. 20, 1877	623	193	11	305
Pump	H. A. Jamieson	192,072	June 19, 1877	580	176	11	1070
Pump	E. Jones	192,264	June 19, 1877	779	237	11	1095
Pump	H. M. Jones	190,870	May 15, 1877	781	231	11	864
Pump	A. S. Lyman	187,153	Feb. 6, 1877	222	72	11	233
Pump	E. McCoy	196,243	Oct. 16, 1877	587	169	12	659
Pump	G. R. McCrum	186,358	Jan. 16, 1877	554	168	11	96
Pump	J. Olsen and K. N. Thuessen	188,534	Mar. 20, 1877	583	180	11	474
Pump	S. Petersen	187,045	Feb. 6, 1877	125	41	11	219
Pump	L. D. Railsback	188,481	Mar. 20, 1877	536	165	11	467
Pump	J. W. Rider	187,416	Feb. 13, 1877	497	154	11	281
Pump	G. W. Robaugh	194,843	Sept. 4, 1877	86	28	12	413
Pump	J. Schrankel	188,964	Mar. 27, 1877	1023	314	11	542
Pump	A. M. Searls	193,043	July 10, 1877	501	150, 151	12	88
Pump	J. E. Smith	188,309	Mar. 13, 1877	349	110	11	433
Pump	J. J. Stuart	188,692	Mar. 20, 1877	734	225	11	494
Pump	T. B. Swan	188,828	Mar. 27, 1877	889	270	11	524
Pump	M. D. Temple	187,934	Feb. 27, 1877	1034	318	11	368

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Pump	A. J. Tyler	188,443	Mar. 13, 1877	489	151, 152	11	452
Pump	N. W. Wheeler	188,450	Mar. 13, 1877	494	153	11	453
Pump	R. White, R. Wallace, and D. Moritz.	195,780	Oct. 2, 1877	82	25	12	573
Pump	J. C. Wright	189,983	Apr. 24, 1877	1005	308	11	714
Pump, Air	E. Burgin	191,927	June 12, 1877	403	126	11	1035
Pump, Air	C. F. Moll and J. H. Altheide	190,610	May 8, 1877	508	151	11	821
Pump, Air-forcing beer	J. B. Moutier	195,834	Oct. 2, 1877	139	40	12	581
Pump and check valve	G. F. Blake	198,071	Dec. 11, 1877	364	113	12	1008
Pump and condenser, Air	J. B. Root	188,958	Mar. 27, 1877	1016	312	11	542
Pump and engine, Rotary	S. D. Simmons	191,258	May 29, 1877	1193	358	11	935
Pump and well	J. Q. Adams	195,782	Oct. 2, 1877	87	26	12	574
Pump, Artesian-well	W. Z. Blakslee	188,229	Mar. 13, 1877	278	87	11	423
Pump attachment	J. R. Devor	197,019	Nov. 13, 1877	298	88	12	811
Pump, Beer	J. Neil	197,049	Nov. 13, 1877	333	98	12	816
Pump, Beer	E. Stewart	194,010	Aug. 7, 1877	213	63	12	263
Pump-bucket	W. D. Mayfield	196,031	Oct. 9, 1877	356	101	12	619
Pump bucket, Chain	I. Avery	192,049	June 19, 1877	557	170	11	1067
Pump bucket, Chain	W. C. Barker	194,640	Aug. 28, 1877	876	261	12	375
Pump bucket, Chain	W. Cooper	189,428	Apr. 10, 1877	423	133	11	621
Pump bucket, Chain	S. F. Lockwood	187,151	Feb. 6, 1877	220	72	11	233
Pump bucket, Chain	E. Miller	190,889	May 15, 1877	709	236	11	866
Pump bucket, Chain	F. Potter	194,532	Aug. 28, 1877	784	233	12	362
Pump buckets, Machine for making valve	J. N. Kanfholz	191,685	June 5, 1877	165	51	11	998
Pump, Chain	J. W. Avery	195,435	Sept. 25, 1877	713	211	12	525
Pump, Chain	W. H. Rutan	187,733	Feb. 27, 1877	835	260	11	342
Pump, Chain	T. Wallis	189,670	Apr. 17, 1877	675	208	11	663
Pump clack-valve	W. C. D. Body	193,685	July 31, 1877	1192	357	12	208
Pump, Deep-well	W. S. Blunt	186,408	Jan. 23, 1877	621	189	11	117
Pump, Direct-acting force	J. K. Van Pelt and W. Lee	194,503	Aug. 21, 1877	745	222	12	347
Pump, Double-acting	J. S. Adams	197,809	Dec. 4, 1877	101	31, 32	12	960
Pump, Double-acting	R. Bean	197,082	Nov. 13, 1877	369	108, 109	12	821
Pump, Double-acting	M. D. Judkins	195,375	Sept. 18, 1877	641	190	12	506
Pump, Double-acting	R. I. Knapp	194,604	Aug. 28, 1877	845	252	12	371
Pump, Double-acting	J. Robertson	192,937	July 10, 1877	397	118	12	75
Pump, Double-acting	T. B. Swan	192,028	June 12, 1877	509	156	11	1048
Pump, Double-acting	W. Teter	197,804	Dec. 4, 1877	98	30	12	960
Pump, Double-acting	W. M. Whiteley	198,062	Dec. 11, 1877	356	110	12	1007
Pump, Double-acting anti-freezing force	H. M. Wyeth	190,946	May 15, 1877	858	254	11	874
Pump, Double-acting force	G. W. Hooper	198,023	Dec. 11, 1877	320	99	12	1001
Pump, Double-action	N. Marshall	196,302	Oct. 23, 1877	660	191	12	678
Pump, Double-action	L. J. Russell	197,900	Dec. 4, 1877	193	58	12	973
Pump for fire-service	W. Jeffers	196,669	Oct. 30, 1877	1036	301	12	742
Pump for refrigerating apparatus, &c., Pneumatic	D. L. Holden	188,137	Mar. 6, 1877	170	52	11	403
Pump for town and city supply	W. H. Lang	187,719	Feb. 27, 1877	820	255, 256	11	340
Pump, Force	T. K. Ball	195,076	Sept. 11, 1877	334	101	12	454
Pump, Force	S. R. Dawson	193,754	July 31, 1877	1253	376	12	217
Pump, Force	H. T. Drain	186,464	Jan. 23, 1877	675	207	11	124
Pump, Force	C. Green	187,755	Feb. 27, 1877	855	266	11	344
Pump, Force	W. S. Laney	193,665	July 31, 1877	1174	351, 352	12	205
Pump, Force	W. S. Laney	195,897	Oct. 9, 1877	216	61	12	600
Pump, Force	J. M. Lemon	193,822	Aug. 7, 1877	28	9	12	238
Pump, Force	C. C. Mason and J. F. Bracket	186,144	Jan. 9, 1877	327	100	11	60
Pump, Force	W. H. McGrew	198,136	Dec. 11, 1877	434	135	12	1017
Pump, Force	C. H. McKeehan	186,594	Jan. 23, 1877	796	245	11	140
Pump, Force	C. H. McKeehan	191,457	May 29, 1877	1374	414, 415	11	959
Pump, Force	W. N. Starr	188,977	Mar. 27, 1877	1032	317	11	544
Pump, Force	J. Tallent	196,953	Nov. 6, 1877	223	66	12	791
Pump, Garden	C. Vogelsang	194,388	Aug. 21, 1877	626	188	12	332
Pump-handle	A. S. Leasou	185,937	Jan. 2, 1877	129	38	11	25
Pump-handle and sucker-rod joint	S. J. Adams	188,764	Mar. 27, 1877	813	249	11	514
Pump, Lift	J. S. Baker	197,811	Dec. 4, 1877	105	32	12	961
Pump, Lift	E. Barnes	195,253	Sept. 18, 1877	532	155	12	490
Pump, Lift	W. M. Gibson	197,354	Nov. 20, 1877	659	196	12	872
Pump, Lift	A. Johnson	197,034	Nov. 13, 1877	314	93	12	813
Pump, Lift	J. Luster	192,924	July 10, 1877	387	115	12	73
Pump, Lift	G. C. Merrill and C. C. Utter	197,284	Nov. 20, 1877	586	174	12	861
Pump, Lift and force	T. B. Swan	192,950	July 10, 1877	412	123	12	77
Pump logs, Machine for boring	W. C. Barker	194,638	Aug. 28, 1877	874	261	12	375
Pump, Measuring	C. Hildebrand	188,905	Mar. 27, 1877	962	294	11	534
Pump, Mine	E. Daggett	193,227	July 17, 1877	694	212	12	122
Pump, Mine	E. Daggett	193,228	July 17, 1877	696	213	12	122
Pump, Oil or other deep well	D. L. Lewis	191,448	May 29, 1877	1365	412	11	958
Pump, Oil-well	L. B. Fulton	197,027	Nov. 13, 1877	309	92	12	812
Pump, Oil-well	W. Turner	187,572	Feb. 20, 1877	656	204	11	309
Pump operated by springs or weights	A. L. Hunsaker	197,854	Dec. 4, 1877	146	45	12	967
Pump-operating apparatus	J. A. and D. J. Hurley	195,508	Sept. 25, 1877	787	232	12	535
Pump, Oscillating	G. R. Winkler	196,732	Oct. 30, 1877	1097	819	12	750
Pump-piston	G. W. Low	195,764	Oct. 2, 1877	71	21	12	571
Pump-piston	J. M. Springer	191,188	May 22, 1877	1106	330	11	915
Pump-plunger	H. H. Tuttle	191,271	May 29, 1877	1205	362	11	937
Pump, Portable	J. W. Douglas	192,979	July 10, 1877	438	131	12	81
Pump, Portable	W. H. Paulding	190,512	May 8, 1877	417	121	11	809
Pump reel, Sand	D. C. Brawley	192,561	July 3, 1877	5	2	12	13
Pump reel, Sand	D. C. Brawley	193,394	July 24, 1877	880	269	12	155
Pump reel, Sand	D. C. Brawley	193,475	July 24, 1877	955	291	12	166
Pump reel, Sand	W. J. McKee	191,358	May 29, 1877	1278	386	11	947
Pump reel, Sand	M. B. McManus	198,652	Dec. 25, 1877	976	297	12	1111

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Pump reel, Sand	W. H. H. Morris	193,418	July 24, 1877	904	275	12	159
Pump-rod adjuster	H. Freeman	192,251	June 19, 1877	765	233	11	1094
Pump-rod adjuster	N. C. M. Gifford and P. Abell	192,690	July 3, 1877	142	40	12	32
Pump-rod adjuster	D. L. Lewis	191,447	May 29, 1877	1364	412	11	958
Pump-rod adjuster for oil-wells	A. H. Jarecki	196,231	Oct. 16, 1877	574	166	12	657
Pump, Rotary	V. C. J. Ortmans	197,166	Nov. 13, 1877	453	134	12	834
Pump, Rotary	J. A. Parsons	193,891	Aug. 7, 1877	90	29	12	247
Pump, Rotary	T. B. Swan and E. F. Edgecomb.	191,727	June 5, 1877	201	63	11	1094
Pump, Sand	W. H. Birge	191,302	May 29, 1877	1234	371	11	941
Pump, Sand	W. H. Birge	193,915	Aug. 7, 1877	113	36	12	250
Pump, Sand	W. Forker	194,948	Sept. 4, 1877	192	59	12	426
Pump, Sand	L. Widger and L. Patterson	196,509	Oct. 23, 1877	867	250	12	706
Pump, Ship's	A. F. Eells and S. C. Loud	188,879	Mar. 27, 1877	939	286	11	531
Pump, Steam	C. Ahrens	189,414	Apr. 10, 1877	408	129	11	620
Pump, Steam	W. H. Guild, jr.	194,672	Aug. 28, 1877	907	270	12	380
Pump, Steam	J. W. Pearce	192,873	July 10, 1877	342	101	12	66
Pump, Steam	W. Weyhe	197,578	Nov. 27, 1877	903	268 269	12	916
Pump, Steam and vacuum	J. E. Gary	187,841	Feb. 27, 1877	944	293 294	11	356
Pump, Steam and vacuum	G. Hambruch	196,088	Oct. 16, 1877	423	123	12	636
Pump, Steam vacuum	E. S. Blake	191,397	May 29, 1877	1309	397	11	952
Pump, Steam vacuum	H. B. Johnson	188,145	Mar. 6, 1877	177	54	11	404
Pump stock and plunger	W. C. Barker	194,639	Aug. 28, 1877	875	261	12	375
Pump, Suction and force	T. B. Swan	189,518	Apr. 10, 1877	503	159	11	622
Pump, Suction and force	J. N. Wilson	193,066	July 10, 1877	522	157	12	91
Pump to remove water and prevent deposits in oil-wells.	C. Means	194,704	Aug. 28, 1877	937	278	12	383
Pump, Treadle-operated confluent	R. H. Schenck	194,377	Aug. 21, 1877	617	185	12	330
Pump-valve	N. S. Bean	192,633	July 3, 1877	79	23	12	23
Pump-valve	S. Bradley	197,453	Nov. 27, 1877	774	231	12	898
Pump-valve	G. H. Corliss	196,469	May 8, 1877	374	108	11	803
Pump-valve	D. F. Dodge	194,337	Aug. 21, 1877	583	174	12	326
Pump-valve	G. D. Hopper and W. H. Laufkotter.	186,131	Jan. 9, 1877	315	96	11	58
Pump-valve	E. Lannay	194,252	Aug. 14, 1877	480	145	12	305
Pump-valve	W. Painter	187,411	Feb. 13, 1877	489	152	11	280
Pump-valve	W. E. Worthen	189,830	Apr. 17, 1877	830	257	11	682
Pump-valve, Direct-acting	G. W. Dixon	193,600	July 31, 1877	1102	330	12	196
Pump valve-gear, Steam	J. Gates	192,367	June 26, 1877	907	272	11	1124
Pump valve-gear, Steam	B. S. Lawson	186,584	Jan. 23, 1877	787	242	11	139
Pump valve, Steam	J. W. Mathieson	189,370	Apr. 10, 1877	365	117	11	614
Pump-valve, Steam vacuum	G. H. Nye	188,067	Mar. 6, 1877	106	32	11	395
Pump, Wall	R. White, R. Wallace, and D. Moritz.	195,781	Oct. 2, 1877	85	25	12	573
Pumps, Adjustable elastic bucket for chain	T. Kenyon	189,629	Apr. 17, 1877	633	196	11	657
Pumps, Adjuster for pistons or polish-rods of oil-well.	E. A. L. Roberts	195,728	Oct. 2, 1877	39	12	12	566
Pumps, Check-valve for oil	A. M. Terrill	194,627	Aug. 28, 1877	865	258	12	374
Pumps, Driving mechanism for ship's	R. Gordon and W. W. Baxter	189,622	Apr. 17, 1877	627	194	11	656
Pumps, Seating foot-valves in	J. A. Newell and A. Lucasso	195,153	Sept. 11, 1877	413	123	12	466
Pumping and dredging apparatus, Pipe-joint for	J. B. Eads	189,436	Apr. 10, 1877	430	135	11	622
Pumping apparatus	W. F. Plockross	189,955	Apr. 24, 1877	976	299	11	711
Pumping apparatus for raising wine, beer, &c	C. Laburthe	193,371	July 24, 1877	861	263	12	152
Pumping apparatus, Well	J. E. Nale	193,541	July 24, 1877	1025	308	12	175
Pumping-engine	A. Carr and J. Arthur	186,539	Jan. 23, 1877	743	228	11	133
Pumping-engine	H. Davey	186,118	Jan. 9, 1877	303	92, 93	11	57
Pumping-engine	J. S. Wilson	186,967	Feb. 6, 1877	53	18	11	209
Pumping-engine, Duplex	G. F. Blake	185,888	Jan. 2, 1877	71	22	11	18
Pumping-engine, Duplex	G. F. Blake	186,659	Jan. 30, 1877	865	267	11	159
Pumping-engine, Duplex	W. B. Snow	194,480	Aug. 21, 1877	726	216	12	345
Pumping-engine valve mechanism	N. W. Condict, jr.	194,223	Aug. 14, 1877	450	137	12	301
Pumping fluid from casks, &c., Apparatus for	W. F. Class	191,656	June 5, 1877	137	43	11	995
Pumping machinery, Steam	W. E. Worthen	192,042	June 12, 1877	527	162	11	1051
Pumping system, Hydraulic and wire-rope	W. P. Barclay	197,239	Nov. 20, 1877	545	161	12	855
Punch, Alarm and registering	W. H. Barr	186,523	Jan. 23, 1877	725	223	11	131
Punch, Conductor's	R. H. Morgan	198,409	Dec. 18, 1877	727	220	12	1067
Punch, Hand	H. F. Osborne	187,896	Feb. 27, 1877	996	308	11	363
Punch, Leather, &c	C. and A. B. Jenkins	190,683	May 15, 1877	607	180	11	841
Punch, Check-numbering	C. S. Westcott, B. Adriance, and T. Miner.	188,761	Mar. 27, 1877	810	248	11	514
Punch, Ticket	J. B. Aiken	195,876	Oct. 9, 1877	193	55	12	597
Punch, Ticket	J. S. Foster	190,303	May 1, 1877	187	56	11	770
Punch, Ticket	C. E. Parks	190,157	May 1, 1877	47	13	11	152
Punching and other metal machines, Feed apparatus for.	J. Morgan	186,212	Jan. 16, 1877	402	123	11	77
Punching and shearing machine	M. Gluck	192,646	July 3, 1877	97	28	12	25
Punching and shearing machine, Metal	A. Lee	190,771	May 15, 1877	694	205	11	852
Punching and shearing machine, Metal	H. O'Neill	193,026	July 10, 1877	480	145	12	86
Punching machine, Metal	S. W. Baldwin	195,559	Sept. 25, 1877	828	246	12	541
Punching machine, Metal	A. Robertson	191,074	May 22, 1877	999	298	11	901
Punching machine, Metal	I. C. Schuyler	185,973	Jan. 2, 1877	159	49	11	29
Punching machine, Metal	A. Watkins	185,991	Jan. 2, 1877	175	54	11	32
Punching machine, Metallic-lath	J. G. Clark	186,109	Jan. 9, 1877	295	89	11	56
Punching machine, Sheet-metal	T. Rowan	189,656	Apr. 17, 1877	661	204	11	661
Punching or shearing machine	N. Gooder and B. Lavin	196,576	Oct. 30, 1877	948	274	12	729
Push-pin and watch-key combined	A. A. Fisher and S. H. Lucas	192,425	June 26, 1877	961	288	11	1172
Pyrotechnic shell	C. A. L. Totten	187,570	Feb. 20, 1877	654	203	11	309
Pyrotechnic signal-cartridge	J. J. Detwiller	191,843	June 12, 1877	327	101	11	1025
Q.							
Quartz-crushing machine	H. Gebhardt	193,503	July 24, 1877	984	298	12	170
Quartz-mill	A. Oliver	187,664	Feb. 20, 1877	747	231	11	321

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Quartz-mills, Ore-feeder for	G. A. Church	188,587	Mar. 20, 1877	631	195	11	471
Quicksilver-furnace	S. Charles	186,542	Jan. 23, 1877	745	229	11	134
Quilting-frame	R. W. Burk	192,973	July 10, 1877	433	130	12	80
Quilting-frame	H. T. Davis	186,316	Jan. 16, 1877	496	152	11	90
Quilting-frame	M. A. Mills	187,885	Feb. 27, 1877	986	305	11	361
Quilting-frame	F. M. Tousley	187,571	Feb. 20, 1877	655	204	11	309
Quilting-frame	A. Warren	187,205	Feb. 6, 1877	266	87	11	238
Quilting-frame and clothes-bar	A. E. Furness	190,844	May 15, 1877	756	224	11	861
Quilting-machine	A. Beck	190,184	May 1, 1877	73	20	11	756
Quilting-machine	A. Beck	196,863	Nov. 6, 1877	128	39	12	779
Quilting-machine	J. J. Crall	193,852	Aug. 7, 1877	51	16	12	241
R.							
Rack:							
See Book-rack. Dish-rack.							
Book-displaying rack. Feed-rack.							
Broom-rack. Filter-rack.							
Broom and brush rack. Hat-rack.							
Card-rack. Hay-rack.							
Cloth-rack. Oven-rack.							
Clothes-rack. Pen-rack.							
Clothes-drying rack. Towel-rack.							
Radiator, Steam	G. W. Blake	189,017	Apr. 3, 1877	7	3	11	559
Radiator, Steam	G. W. Blake	189,018	Apr. 3, 1877	8	3	11	560
Radiator, Steam	A. W. Cram	186,807	Jan. 30, 1877	1003	312	11	178
Radiator, Steam	W. M. Fuller	190,205	May 1, 1877	91	27	11	158
Radiator, Steam	R. S. Gillespie	189,452	Apr. 10, 1877	444	139	11	624
Radiator, Steam	R. S. Gillespie	192,755	July 3, 1877	195	56	12	39
Radiator, Steam	R. L. Kernochan	191,156	May 22, 1877	1075	322	11	911
Radiator, Steam	J. J. Lawler	193,877	Aug. 7, 1877	72	23	12	245
Radiator, Steam	H. E. Light	195,221	Sept. 18, 1877	494	146	12	486
Radiator, Steam	J. H. Mills	198,036	Dec. 11, 1877	331	103	12	1003
Radiator, Steam	W. B. Snow	197,907	Dec. 4, 1877	200	61	12	974
Radiator, Steam	J. R. Worswick and J. A. Prindle	192,140	June 19, 1877	644	197	11	1078
Radiator, Steam-heating	C. C. Walworth	188,268	Mar. 13, 1877	310	98	11	428
Radiators, Air-box for	G. W. Blake	190,950	May 22, 1877	882	261	11	885
Rag-engine	E. D. G. Jones	194,824	Sept. 4, 1877	69	23	12	410
Rail-joint	W. B. Chisholm	197,827	Dec. 4, 1877	121	37	12	963
Rail-joint	J., sr., and J. R. Hipsley	197,852	Dec. 4, 1877	145	44	12	966
Rail-joint	E. Payne	197,493	Nov. 27, 1877	814	243	12	904
Rail-joint	B. Ross	195,844	Oct. 2, 1877	150	43	12	582
Rail-joint	W. H. H. Scholey	188,031	Mar. 6, 1877	73	21	11	390
Rail-joint and fish-plate	F. Brown and J. Smith	186,794	Jan. 30, 1877	992	308	11	176
Rail-joint bolt-lock	A. A. Wilder	196,064	Oct. 9, 1877	388	111	12	624
Rails and fag ends of rails to bars, Reducing old	J. C. Hill, A. C. Pilliner, and W. Williams.	189,894	Apr. 24, 1877	925	281 282	11	703
Rails, Hot-bed for	W. R. Jones	197,376	Nov. 20, 1877	680	203	12	876
Rails, Machine for rerolling and reducing old	H. Greer	187,224	Feb. 13, 1877	306	100	11	256
Railway	E. Frere	192,981	July 10, 1877	439	132	12	81
Railway and condnit combined	J. B. Ward	198,060	Dec. 11, 1877	354	110	12	1007
Railway and locomotive	G. F. W. Reble	197,945	Dec. 11, 1877	244	75, 76	12	990
Railway-brake apparatus	H. F. Knapp	186,257	Jan. 16, 1877	441	136	11	83
Railway-brake, Vacuum	J. D. Johnson	196,459	Oct. 23, 1877	807	232	12	699
Railway-buffer, Automatic	C. S. Chace	197,248	Nov. 20, 1877	554	163	12	856
Railway-chair	R. H. Driver and C. A. Smith	198,360	Dec. 18, 1877	676	207	12	1059
Railway-chair	W. MacLellan and J. P. Smith	187,652	Feb. 20, 1877	739	228	11	320
Railway chair and tie	N. S. White	188,710	Mar. 20, 1877	750	230	11	497
Railway clamp, Endless-rope	W. Eppelsheimer	189,204	Apr. 3, 1877	168	58	11	581
Railway cross-tie	D. Horrie	198,618	Dec. 25, 1877	940	287	12	1107
Railway cross-tie	E. E. Lewis	198,464	Dec. 25, 1877	794	241	12	1085
Railway cross-tie	H. S. Wilson	188,087	Mar. 6, 1877	121	36	11	397
Railway-crossing	E. H. Johnston	198,393	Dec. 18, 1877	711	216	12	1064
Railway-crossing	J. S. Williams	193,063	July 10, 1877	519	157	12	91
Railway-crossing	J. S. Williams	193,065	July 10, 1877	521	157	12	91
Railway-curve	D. E. Dutrow	188,877	Mar. 27, 1877	938	286	11	531
Railway-draw-bridge signal	W. Gilbert and J. Garrabrant	197,358	Nov. 20, 1877	663	198	12	873
Railway, Endless-rope traction	A. S. Hallidie	195,505	Sept. 25, 1877	784	231	12	534
Railway, Endless-rope traction	A. E. Hovey	195,372	Sept. 18, 1877	636	189	12	506
Railway-frog	E. H. Bryant	193,363	July 24, 1877	853	261	12	151
Railway-frog	C. L. Cooke	197,099	Nov. 13, 1877	390	115	12	824
Railway-frog	L. H. North	194,714	Aug. 28, 1877	945	281	12	385
Railway-frog	J. T. Richardson	191,470	May 29, 1877	1386	418	11	961
Railway-gate	S. P. Boston	188,574	Mar. 20, 1877	617	191	11	479
Railway-gate	A. Fox and L. and J. Vorwald	189,447	Apr. 10, 1877	439	138	11	623
Railway-gate	W. I. French	194,864	Sept. 4, 1877	108	34	12	415
Railway-gate	E. W. Moyer	192,706	July 3, 1877	154	44	12	34
Railway-gate	W. B. Smith	195,665	Sept. 25, 1877	931	278	12	556
Railway-gate	H. A. Stearns	192,882	July 10, 1877	350	103	12	67
Railway-gate	H. A. Stearns	194,383	Aug. 21, 1877	622	187	12	331
Railway-gate	J. H. Vickars	194,316	Aug. 21, 1877	561	169	12	323
Railway-joint	S. Forman	186,552	Jan. 23, 1877	756	232	11	135
Railway-joint	C. Palm and J. Fitzgerald	189,381	Apr. 10, 1877	373	120	11	616
Railway-joint	W. M. Watson	192,101	June 19, 1877	603	184	11	1073
Railway nut-lock	T. J. Sawyer	194,562	Aug. 28, 1877	811	241	12	366
Railway-rail	L. I. Baker and L. O. Root	195,558	Sept. 25, 1877	828	246	12	541
Railway-rail	J. Foster	188,617	Mar. 20, 1877	655	203	11	485
Railway-rail, Compound	T. W. Travis	194,193	Aug. 14, 1877	426	128	12	298
Railway-rail joint	H. H. Doty	194,496	Aug. 21, 1877	740	220	12	346
Railway-rail joint	W. G. Dunn	196,569	Oct. 30, 1877	942	272	12	728
Railway-rail joint	J. A. Eno	185,901	Jan. 2, 1877	88	27	11	19
Railway-rail joint	G. H. Grant	190,136	May 1, 1877	23	6	11	749
Railway-rail joint	A. B. Ibbotson and F. J. Talbot	190,863	May 15, 1877	773	230	11	863
Railway-rail joint	S. Ray	186,623	Jan. 23, 1877	824	254	11	144
Railway-rail joint	H. W. Woodruff	194,755	Aug. 28, 1877	989	293	12	390

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Railway-rails, Apparatus for carrying	A. J. Gustin	190,211	May 1, 1877	98	28	11	759
Railway-rails, Apparatus for leveling	J. Beugger	188,846	Mar. 27, 1877	907	276	11	527
Railway-rails, Carrier-roll for	A. J. Gustin	190,212	May 1, 1877	99	28	11	759
Railway-rails, Clamp for holding ratchet-drills for drilling.	L. Beland	186,225	Jan. 16, 1877	415	127	11	79
Railway-rails, &c., Detecting defects in	A. Herring	189,858	Apr. 24, 1877	885	270	11	698
Railway-rails, Device for clamping the bolts on fish-plates of.	F. E. Weed and R. Messinger	193,388	July 24, 1877	876	268	12	155
Railway-rails, Fish-plate bolt for	T. McDonough	194,360	Aug. 21, 1877	604	181	12	328
Railway-rails, Hot-bed for bending	W. R. Jones	189,471	Apr. 10, 1877	461	145	11	626
Railway-rails, Machine for sawing steel	C. R. Jacoby	186,423	Jan. 23, 1877	634	193	11	119
Railway-signal	A. M. Bodley	186,531	Jan. 23, 1877	733	225	11	132
Railway-signal	L. B. Carver	191,753	June 12, 1877	237	75	11	1014
Railway-signal	H. C. Crosby	194,992	Sept. 11, 1877	246	74	12	441
Railway-signal	C. and F. Haise	190,213	May 1, 1877	100	29	11	759
Railway signal and drawbridge operating device	W. Buchanan	198,449	Dec. 25, 1877	780	237	12	1083
Railway-signal, Electric	J. I. Conklin, jr	191,836	June 12, 1877	321	100	11	1024
Railway-signal, Electric	J. D. Hughson	186,572	Jan. 23, 1877	772	238, 239	11	137
Railway-signal, Electric	J. P. Tirrell	191,732	June 5, 1877	206	65	11	1004
Railway-signal, Electro-magnetic	H. Brunius	189,999	Apr. 24, 1877	1022	312, 313, 314	11	716
Railway-signal, Electro-magnetic	C. S. Shivler	190,379	May 1, 1877	258	77	11	780
Railway-signal, Hydraulic	H. Tilden	193,625	July 31, 1877	1128	338	12	200
Railway-signal, Pneumatic	J. F. Kettell and A. H. Howland	196,022	Oct. 9, 1877	343	98	12	618
Railway-signals, Circuit-closer for	J. I. Conklin, jr	198,572	Dec. 25, 1877	892	272	12	1100
Railway-signals, Circuit-closer for electric	D. Rousseau and W. C. Smith	187,318	Feb. 13, 1877	402	127	11	269
Railway speed-indicator, Pneumatic	W. W. Wythe	198,233	Dec. 18, 1877	553	170	12	1041
Railway, Street	W. H. and C. M. Stow	193,291	July 17, 1877	763	235	12	131
Railway-switch	J. H. Ainsworth	193,206	July 17, 1877	663	203	12	118
Railway-switch	J. H. Ainsworth	196,284	Oct. 23, 1877	638	185	12	675
Railway-switch	T. Alexander and W. Dunn	187,578	Feb. 20, 1877	663	206	11	310
Railway-switch	R. W. Barrett	188,091	Mar. 6, 1877	124	37	11	397
Railway-switch	D. A. Burr	188,851	Mar. 27, 1877	912	277	11	527
Railway-switch	S. H. Finch	189,207	Apr. 3, 1877	171	59	11	582
Railway-switch	J. J. Golden	189,855	Apr. 24, 1877	882	269	11	698
Railway-switch	J. J. Golden	198,197	Dec. 18, 1877	515	159	12	1036
Railway-switch	J. W. Harding	194,818	Sept. 4, 1877	65	21	12	409
Railway-switch	E. Hugron	192,868	July 10, 1877	337	99	12	66
Railway-switch	G. M. McMahan and J. T. Craik	193,534	July 24, 1877	1017	306	12	174
Railway-switch	D. Rousseau	186,626	Jan. 23, 1877	827	255	11	144
Railway-switch	C. W. Simonds	198,054	Dec. 11, 1877	347	108	12	1006
Railway-switch	B. J. Stukenborg and J. Bell	196,263	Oct. 16, 1877	608	175	12	662
Railway-switch	W. Wharton	197,915	Dec. 4, 1877	209	63	12	976
Railway-switch	W. Wharton, jr	198,229	Dec. 18, 1877	548	169	12	1040
Railway-switch locking device	J. Livesey, J. Edwards, and W. Jeffreys	194,694	Aug. 28, 1877	928	276	12	382
Railway-switch signal	G. W. Anders	196,619	Oct. 30, 1877	983	287	12	735
Railway-switch signal, Electro-magnetic	T. S. Hall and G. H. Snow	191,958	June 12, 1877	438	135, 136	11	1039
Railway-switch signals, Circuit-closer for electro-magnetic.	H. N. Rowell	191,076	May 22, 1877	1002	298	11	901
Railway-tie	A. H. Campbell	190,739	May 15, 1877	666	197	11	848
Railway-tie	G. W. Chandler	186,710	Jan. 30, 1877	911	282	11	166
Railway-tie, Street	J. Turner	197,299	Nov. 20, 1877	600	178	12	863
Railway-tie, Street	J. Turner	197,300	Nov. 20, 1877	601	178	12	863
Railway-track	A. de Wieczffinski-Serres	192,842	July 10, 1877	313	92	12	63
Railway-track	J. Foster	198,370	Dec. 18, 1877	688	210	12	1061
Railway track-clearer	M. C. Isaacs	195,217	Sept. 18, 1877	490	145	12	485
Railway track-clearer, Street	P. Diemer	197,546	Nov. 27, 1877	872	259	12	912
Railway-tracks, Device for raising and leveling	G. Schwartz	187,421	Feb. 13, 1877	501	155	11	281
Railway-wheel	J. A. Osenbrück	190,246	May 1, 1877	126	38	11	763
Railways, Nut-lock for fish-bars on	L. S. Brown	195,880	Oct. 9, 1877	196	56	12	597
Railways, Tramway-track for wire-rope	W. Eppelsheimer	193,757	July 31, 1877	1256	377	12	218
Rake: *See* Hand-rake. Harvester-rake. Hay-rake. Mash-rake. Revolving horse-rake. Salt-boiler rake. Self-cleaning rake.							
Ram, Marine	N. H. Borgfeldt	191,514	June 5, 1877	4	1	11	977
Range	J. Brownback and M. Towers, jr.	189,919	Apr. 24, 1877	945	289	11	706
Range	E. C. Frost	196,347	Oct. 23, 1877	704	203	12	684
Range	J. H. Kite	196,123	Oct. 16, 1877	467	136	12	642
Range and stove hot-water-tank coupling	N. M. Simonds	198,697	Dec. 25, 1877	1016	309	12	1117
Range and stove plate	N. M. Simonds	186,372	Jan. 16, 1877	569	173	11	98
Range, Nursery cooking	L. Tobey	189,968	Apr. 24, 1877	990	303	11	712
Ratchet-brace	W. B. Smith	188,684	Mar. 20, 1877	725	222	11	494
Ratchet-drill	W. H. Richards	197,896	Dec. 4, 1877	189	57	12	973
Ratchet-wrench	E. A. Leland	187,288	Feb. 13, 1877	369	118	11	265
Ratchet-wrench	M. Vassar, 2d	193,301	July 17, 1877	775	237	12	132
Rattan-machines, Measuring mechanism for	N. H. Richardson	189,957	Apr. 24, 1877	978	299, 300	11	711
Rattan-sawing machine	E. F. Woodbury	190,109	Apr. 24, 1877	1151	350, 351	11	733
Rattans, Working	T. P. Thorpe	192,138	June 19, 1877	642	196	11	1078
Rawhide, Manufacturing fulled	J. A. J. Shultz	187,492	Feb. 20, 1877	587		11	300
Razor-sharpener, Roller	W. T. Jahne and C. H. White	191,859	June 12, 1877	342	105	11	1026
Razor-strop	J. S. Fisher	198,592	Dec. 25, 1877	910	278	12	1103
Razor-strop	J. Maxson	196,985	Nov. 13, 1877	268	79	12	806
Razor-strop	J. R. Torrey	188,830	Mar. 27, 1877	890	271	11	524
Razor-strop case	L. A. Morse	188,171	Mar. 6, 1877	204	63	11	407
Reamer	A. Goddard	190,307	May 1, 1877	192	57	11	771
Reamer, Expanding	R. Blair	191,561	June 5, 1877	50	15	11	983

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Reciprocating engine	J. Davies	198,535	Dec. 25, 1877	861	262	12	1095
Reciprocating engine	D. H. Iseminger	195,013	Sept. 11, 1877	269	82	12	445
Reciprocating engine	J. N. Kaufholz	197,035	Nov. 13, 1877	315	94	12	813
Reciprocating steam-engine	A. Higginson	196,451	Oct. 23, 1877	798	230	12	698
Reciprocating steam-engine	W. Walker	194,198	Aug. 14, 1877	429	130	12	298
Reclining-chair	J. Roy	186,957	Feb. 6, 1877	44	15	11	207
Reclining-chair	H. S. Smith	190,788	May 15, 1877	708	209	11	854
Recorder: *See* Passenger-recorder. Speed and distance recorder.							
Rectifying-apparatus	B. J. Hobson	197,368	Nov. 20, 1877	672	201	12	874
Rectifying-apparatus	J. H. Thierman	197,428	Nov. 20, 1877	732	219	12	883
Reel: *See* Automatic hose-reel. Bolting-reel. Clothes-line reel. Fishing-line reel. Grain-header reel. Harvester-reel. Pump-reel. Ticket-reel.							
Reflector	H. O. Baker	192,321	June 26, 1877	863	261	11	1119
Reflector	E. Boesch	187,589	Feb. 20, 1877	674	210	11	312
Reflector and plant protector	A. Pudigon	189,653	Apr. 17, 1877	657	203	11	660
Reflector, Chandelier	G. H. Kitchen	195,023	Sept. 11, 1877	279	85	12	446
Reflector, Gas-burner	W. E. Prall	196,765	Nov. 6, 1877	27	8	12	765
Reflector, Lamp	W. D. Cummings	187,706	Feb. 27, 1877	809	251	11	338
Reflectors, Adjustable support for lamp	R. Henry	193,705	July 31, 1877	1208	362	12	210
Refrigerating apparatus	F. P. E. Carre and E. Jullien	187,354	Feb. 13, 1877	434	137, 138	11	273
Refrigerating butter-carriers	S. D. Byram	198,568	Dec. 25, 1877	889	271	12	1099
Refrigerating by means of ammonia	R. H. Lucas	193,375	July 24, 1877	864	264	12	153
Refrigerating-chamber	G. W. Cornell	194,414	Aug. 21, 1877	653	196	12	335
Refrigerating medium	J. Gamgee	196,654	Oct. 30, 1877	1024		12	740
Refrigerating oyster-packages	J. C. Jones	190,333	May 1, 1877	216	64	11	774
Refrigerating shipping-box	H. A. Duc, jr	188,609	Mar. 20, 1877	649	201	11	484
Refrigerating transportation-case	R. B. Lamb	198,124	Dec. 11, 1877	422	131	12	1016
Refrigerator	G. A. Banta	188,493	Mar. 20, 1877	547	168	11	469
Refrigerator	J. J. Bate	188,567	Mar. 20, 1877	610	189	11	478
Refrigerator	J. J. Bate	189,990	Apr. 24, 1877	1010	309	11	715
Refrigerator	W. P. Bradley	196,330	Oct. 23, 1877	688	198	12	682
Refrigerator	E. Clark	194,130	Aug. 14, 1877	370	109, 110	12	290
Refrigerator	G. Collins	195,577	Sept. 25, 1877	847	252	12	544
Refrigerator	G. H. Crisfield	196,200	Jan. 16, 1877	394	120	11	76
Refrigerator	C. S. Crist and E. Berrian	197,206	Nov. 20, 1877	512	151	12	850
Refrigerator	H. E. Fuller	188,509	Mar. 20, 1877	560	173	11	471
Refrigerator	S. Gasper	190,846	May 15, 1877	757	225	11	861
Refrigerator	J. A. Kunkel	194,251	Aug. 14, 1877	479	144	12	305
Refrigerator	J. A. Kunkel	196,675	Oct. 30, 1877	1041	302	12	742
Refrigerator	C. H. Oley	188,173	Mar. 6, 1877	205	63, 64	11	407
Refrigerator	E. R. Olin	198,466	Dec. 25, 1877	795	242	12	1086
Refrigerator	J. R. Reynolds	188,948	Mar. 27, 1877	1004	308	11	540
Refrigerator	H. Siegelstyl	192,465	June 26, 1877	996	300	11	1136
Refrigerator	D. A. Simons	197,904	Dec. 4, 1877	198	60	12	914
Refrigerator	G. F. Smith	193,563	July 24, 1877	1048	314	12	178
Refrigerator	J. W. Stewart	186,376	Jan. 16, 1877	577	177	11	98
Refrigerator	F. A. Thompson	187,935	Feb. 27, 1877	1035	318	11	368
Refrigerator	L. Thompson and B. E. Parkhurst	191,729	June 5, 1877	203	64	11	1004
Refrigerator	W. P. Whitson	186,649	Jan. 23, 1877	846	262	11	147
Refrigerator	L. B. Woolfolk	192,806	July 3, 1877	251	73, 74	12	46
Refrigerator and counter, Combined	F. Roloson	198,158	Dec. 11, 1877	458	143	12	1021
Refrigerator and filter	A. McClain	188,650	Mar. 20, 1877	694	213	11	489
Refrigerator and water-cooler	A. Axt	195,557	Sept. 25, 1877	827	246	12	541
Refrigerator bottle-cooler and water-cooler, Combined	E. Zahringer	194,945	Sept. 4, 1877	189	58	12	426
Refrigerator-building	R. M. Birdsall	195,565	Sept. 25, 1877	835	248	12	542
Refrigerator-building	C. L. Riker	189,958	Apr. 24, 1877	979	300	11	711
Refrigerator-buildings, Ice-floor for	J. C. De La Vergne and E. M. Davies.	197,482	Nov. 27, 1877	800	239	12	902
Refrigerator-car	R. Burrows	190,416	May 8, 1877	319	94	11	797
Refrigerator-car	R. Burrows	196,967	Nov. 13, 1877	247	74	12	803
Refrigerator-car	J. Tiffany	193,357	July 24, 1877	845	259	12	151
Refrigerator-car	J. H. Wickes	189,001	Mar. 27, 1877	1052	324	11	546
Refrigerator ice-floor	D. J. Stuart	190,928	May 15, 1877	838	248	11	871
Refrigerator-lining	G. H. Levis	190,973	May 22, 1877	904	268	11	888
Regenerative gas-furnace	C. W. Siemens	190,915	May 15, 1877	824	243, 244	11	869
Register: *See* Air-register. Alarm-register. Billiard-register. Check-register. Fare-register. Grain-register. Hot-air register. Oscillating register. Passenger-register. Stock-register. Stove-register.							
Register	P. Harry	187,464	Feb. 20, 1877	560	173	11	296
Register	A. Shedlock	192,792	July 3, 1877	236	69	12	44
Register and punch, Combined	N. A. Ransom	189,261	Apr. 3, 1877	228	76	11	589
Regulator: *See* Chronometer-regulator. Damper-regulator. Draft-regulator. Feed-water regulator. Gas-regulator. Gas-burner regulator. Heat-regulator. Hydraulic-power regulator. Locomotive exhaust-regulator. Millstone-feed regulator. Pressuro-regulator. Telegraph-regulator. Warp-regulator. Watch-regulator.							

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				Spec.	Dr'g.	Vol.	Page.
Rein-check	C. A. Haas	191,957	June 12, 1877	438	135	11	1039
Rein. Harness check	A. P. Mason	198,644	Dec. 25, 1877	967	295	12	1110
Rein-holder	W. Callaway	188,585	Mar. 20, 1877	630	194	11	481
Rein-holder	C. Conderman	197,964	Dec. 11, 1877	269	82	12	993
Rein-holder	E. B. Guild	198,380	Dec. 18, 1877	698	213	12	1062
Rein-holder	F. E. Hall and C. W. Richardson	189,213	Apr. 3, 1877	179	61	11	583
Rein-holder	G. Jennings	196,806	Nov. 6, 1877	69	21	12	770
Rein-holder	W. S. Marsh	197,941	Dec. 11, 1877	241	74	12	989
Rein-holder	D. C. Montgomery	193,986	Aug. 7, 1877	187	56	12	259
Rein-holder	R. P. Murray	186,748	Jan. 30, 1877	943	293	11	170
Rein-holder	L. Pentz	198,674	Dec. 25, 1877	997	303	12	1114
Rein-holder and whip-socket	C. T. Ellsworth	192,495	June 26, 1877	1027	309	11	1140
Rein-holder and whip-socket	J. W. Weddel	196,278	Oct. 16, 1877	624	180	12	664
Rein spread and attachment, Check	D. Schoonmaker	188,546	Mar. 20, 1877	592	183	11	475
Rein-support	J. L. Ryder	187,050	Feb. 6, 1877	129	42	11	220
Rein support for harness, Check	A. B. Tracy	196,604	Oct. 30, 1877	972	282	12	733
Reins, Detaching apparatus for check	G. H. Hume	197,635	Nov. 27, 1877	964	287	12	925
Rendering fats, Process and apparatus for	W. E. Andrew	189,541	Apr. 10, 1877	529	165, 166	11	636
Rendering-tank gases, Process and apparatus for treating.	D. Ward	185,846	Jan. 2, 1877	31	10	11	13
Resawing lumber, Machine for	S. Putnam	187,904	Feb. 27, 1877	1004	310	11	364
Resawing-machine	J. Lamb	196,157	Oct. 16, 1877	497	145	12	647
Respiratory-brace	G. F. French	191,042	May 22, 1877	972	288	11	897
Retort charging and discharging apparatus	T. F. Rowland	192,288	June 19, 1877	803	244, 245	11	1099
Retort-exhauster, Automatic	P. Munzinger	189,900	Apr. 24, 1877	929	283	11	704
Retort for making gunpowder-charcoal	M. Nichols	197,942	Dec. 11, 1877	241	74, 75	12	989
Retorts, Preventing the accumulation of carbon in	W. Karr	187,866	Feb. 27, 1877	966		11	359
Reverberating-furnace	J. Morrison	196,246	Oct. 16, 1877	589	170	12	659
Reverberating-furnace	J. Morrison	198,061	Dec. 25, 1877	985	300	12	1113
Reverberatory-furnace bottoms, Construction of	P. D. Nicols	191,543	June 5, 1877	36	10	11	981
Reverberatory furnaces, Construction of	J. Morrison	189,486	Apr. 10, 1877	475	150	11	628
Reversible seat	J. E. Rugg	186,273	Jan. 16, 1877	456	140	11	84
Reversible seat	L. T. Stanley	186,505	Jan. 23, 1877	708	218	11	128
Revolving chair	C. C. Clay	186,462	Jan. 23, 1877	674	206	11	124
Ribbon-block	G. N. Stanton	191,554	June 5, 1877	45	13	11	982
Ribbon-protector	H. V. Dempster	187,604	Feb. 20, 1877	688	214	11	314
Ribbons, Case for storing and protecting	A. C. Mason	191,695	June 5, 1877	174	54	11	1000
Rice-cleaning machine	J. Carter	188,499	Mar. 20, 1877	551	170	11	469
Rice-huller	E. H., L. L., and E. A. Graves	189,725	Apr. 17, 1877	727	224	11	669
Rifle-barrel	W. Littlejohn	198,033	Dec. 11, 1877	328	102	12	1003
Rifle, Breech-loading gallery	T. M. Wallis	197,432	Nov. 20, 1877	737	220	12	884
Ring: *See* Clock-regulator ring. Ear-ring. Key-ring. Martingale-ring. Napkin-ring. Spinning-machine ring. Umbrella-notch ring. Yoke-ring.							
Ripping-tool	G. D. Clark	191,569	June 5, 1877	56	17	11	984
Rivers, Deepening bars of	H. F. Knapp	195,896	Oct. 9, 1877	215	61	12	599
Rivers, System and apparatus for the improvement of the navigation of.	W. B. Johns	193,516	July 24, 1877	999	302	12	172
Rivet-making machine	M. Bray	188,772	Mar. 27, 1877	820	251	11	515
Rivet-shanks, Machine for drilling	M. Bray	188,773	Mar. 27, 1877	825	251, 252	11	516
Rivets, Machine for planing off the heads and points of.	H. M. Smith	194,736	Aug. 28, 1877	967	287	12	387
Riveting-machine	J. F. Allen	188,224	Mar. 13, 1877	273	85	11	423
Riveting-machine	J. F. Allen	194,396	Aug. 21, 1877	633	191	12	333
Road-engine	J. C. Carr	195,702	Oct. 2, 1877	11	3	12	562
Road-engine	B. F. Cornish	191,407	May 29, 1877	1320	400	11	953
Road-engine	A. D. Martin	188,300	Mar. 13, 1877	342	107, 108	11	432
Road-engine	C. D. Monnot	197,485	Nov. 27, 1877	803	240	12	902
Road-engine	G. T. Snyder	197,423	Nov. 20, 1877	727	217, 218	12	883
Roaster: *See* Coffee and pea-nut roaster. Coffee-roaster.							
Roaster and warmer	H. S. Graham	188,463	Mar. 20, 1877	517	160	11	465
Roasting and baking pan, Meat	A. A. Lehnert	192,074	June 19, 1877	582	176	11	1070
Rock boring and tunneling machine	H. N. Penrice	192,788	July 3, 1877	230	66, 67	12	43
Rock-drill	R. Allison	190,699	May 15, 1877	624	186	11	843
Rock-drill	U. Cummings	196,788	Nov. 6, 1877	50	15	12	767
Rock-drill	W. W. Gaines	196,574	Oct. 30, 1877	946	274	12	729
Rock-drill	A. A. Goubert and N. W. Pratt	192,068	June 19, 1877	575	174, 175	11	1069
Rock-drill	J. B. Johnson	186,735	Jan. 30, 1877	932	289, 290	11	169
Rock-drill clamp	P. S. Buckminster	198,485	Dec. 25, 1877	816	247	12	1088
Rock-drill, Expanding	W. R. Burt	191,307	May 29, 1877	1238	372	11	941
Rock-drill, Expansion	J. A. Albright	197,075	Nov. 13, 1877	359	106	12	819
Rock-drill-hole cleaner	G. F. Gross	193,328	July 24, 1877	819	251	12	147
Rock-drill, Steam	J. C. Githeus	188,045	Mar. 6, 1877	89	26	11	392
Rock-drill tripod	T. B. Ford	189,853	Apr. 24, 1877	881	269	11	698
Rock-drill tripod	J. B. Johnson	186,842	Jan. 30, 1877	1046	323	11	183
Rock-drilling engine	P. S. Buckminster	186,923	Feb. 6, 1877	4	2	11	203
Rock-drilling engine	W. H. Elliot	191,509	May 29, 1877	1439	433	11	966
Rock-drilling machine	W. W. Dunn	194,419	Aug. 21, 1877	658	198	12	336
Rock-drilling machine	T. B. Ford	188,734	Mar. 27, 1877	783	241	11	510
Rock-drilling machine	O. B. Keeley and J. Fleming	190,871	May 15, 1877	782	232	11	864
Rock-drilling machine	F. Keenan	198,625	Dec. 25, 1877	950	290	12	1108

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Rock-drilling machine	A. J. Mershon	190,232	May 1, 1877	116	34	11	761
Rock-drilling machines, Column for supporting	D. Wood	187,077	Feb. 6, 1877	152	51	11	223
Rocket	J. H. S. Hooper	196,019	Oct. 9, 1877	340	97	12	617
Rocking-chair	C. Brada	196,423	Oct. 23, 1877	771	223	12	694
Rocking-chair, Adjustable	J. R. Brumby	192,674	July 3, 1877	130	36	12	29
Rocking-chair, &c., fan attachment	C. Kranse	192,700	July 3, 1877	151	42	12	33
Rocking-chair fan attachment	J. F. Rakes	194,174	Aug. 14, 1877	410	123	12	295
Rocking-chair fan attachment	C. F. Ruset	193,184	July 17, 1877	643	195	12	116
Rocking-chair, Folding	H. Closterman, jr	195,799	Oct. 2, 1877	104	31	12	576
Rocking-chair, Reclining	W. D. Pope	195,395	Sept. 18, 1877	661	196	12	509
Rod: *See* Connecting-rod; Draft-rod; End-gate rod; Gun-cleaning rod; Lightning-rod; Metal rod; Pitman-rod; Pump-rod; Screw-threaded rod; Sucker-rod; Wagon-bolster stay-rod; Wire rod; Wooden rod.							
Rod-coupling	A. V. Abbott	197,509	Nov. 27, 1877	833	248, 249	12	906
Rod-coupling	T. D. Culter	195,988	Oct. 9, 1877	311	87	12	612
Rod-coupling	W. C. McClintock	189,120	Apr. 3, 1877	95	34	11	572
Rods, Machine for rounding and straightening	J. S. Seaman	192,460	June 26, 1877	991	298	11	1136
Roll for beveling agricultural irons	W. H. McCune	188,394	Mar. 13, 1877	440	137	11	446
Roll grinding and finishing machine	T. H. Savery	194,001	Aug. 7, 1877	201	61	12	261
Roll-grinding machine	J. Megaw	193,984	Aug. 7, 1877	185	56	12	259
Roll, Sectional	A. B. Seymour	192,392	June 26, 1877	935	280	11	1128
Rolls, &c., Composition casting metal for making	J. H. Ricketson	186,955	Feb. 6, 1877	41		11	207
Roller: *See* Curtain-roller; Land-roller; Shade-roller; Sliding-door roller; Trunk-roller; Window-shade roller.							
Roller and harrow, Combined	W. Concannon and W. F. Drago	197,204	Nov. 20, 1877	511	150	12	850
Roller and removable girt, Adjustable tightening	M. B. Erskine and C. A. Weed	186,466	Jan. 23, 1877	677	207	11	124
Rollers from clogging, Preventing	P. Keeley	194,689	Aug. 28, 1877	924	275	12	382
Rolling and straightening cylindrical bars or tubes, Machine for.	J. Reese	190,983	May 22, 1877	916	271	11	889
Rolling articles of metal, Machine for	A. Reese	190,620	May 8, 1877	524	156	11	823
Rolling blanks for sucker-rod joints, Machine for.	G. Donglass	189,201	Apr. 3, 1877	165	57	11	581
Rolling boop-iron, Machine for	F. Hickman	186,561	Jan. 23, 1877	762	234	11	136
Rolling machine, Metal	W. Bunton	188,498	Mar. 20, 1877	550	169	11	469
Rolling machine, Metal	F. Hickman	195,129	Sept. 11, 1877	388	116, 117	12	462
Rolling, Metal	A. Kloman	188,741	Mar. 27, 1877	791	243	11	511
Rolling metals of irregular shapes, Machine for	S. Duff	187,110	Feb. 6, 1877	185	60, 61	11	228
Rolling metallic rings and cylinders, Machine for	R. A. Carter	189,188	Apr. 3, 1877	154	54	11	580
Rolling-mill	P. McGann	188,476	Mar. 20, 1877	531	164	11	467
Rolling-mill roller-gage	E. A. Harvey	195,008	Sept. 11, 1877	260	79, 80	12	444
Rolling-mill screw-gearing	F. Hickman	195,130	Sept. 11, 1877	389	117	12	463
Rolling-mill tender	J. F. Black	194,403	Aug. 21, 1877	640	192	12	334
Rolling-mills, Dog for sheet-metal	E. C. Hegeler and F. W. Matthiessen.	194,598	Aug. 28, 1877	841	250	12	370
Rolling-mills, Relief apparatus for	E. C. Hegeler and F. W. Matthiessen.	192,163	June 19, 1877	669	205	11	1081
Rolling tubes and bars, Machine for	J. O. and A. E. H. B. Butler	197,094	Nov. 13, 1877	384	113	12	823
Roof	S. H. Reed	197,564	Nov. 27, 1877	888	264	12	914
Roof-battening	J. J. Bartlett	185,883	Jan. 2, 1877	67	21	11	17
Roof, Fire-proof	S. Farquhar	195,594	Sept. 25, 1877	865	257	12	546
Roof for sheltering grain, &c., Section	R. Montgomery	194,455	Aug. 21, 1877	699	208	12	341
Roof, Metal	L. Henkle	188,012	Mar. 6, 1877	55	16	11	388
Roof, Sheet-metal	J. B. Clark	195,482	Sept. 25, 1877	760	224	12	531
Roof, Sheet-metal	M. A. Shepard	186,021	Jan. 9, 1877	212	64	11	45
Roof snow-guard	P. A. Dugan	188,287	Mar. 13, 1877	327	113	11	430
Roof snow-guard	P. A. Dugan	193,809	Aug. 7, 1877	13	4	12	236
Roof snow-guard	G. F. Folsom	186,996	Feb. 6, 1877	81	28	11	212
Roof snow-guard	G. F. Folsom	190,204	May 1, 1877	91	26	11	158
Roofs, Paint composition for	A. Blaisdell	190,183	May 1, 1877	73		11	756
Roofs, &c., Water-tight joint for	E. Waters	187,740	Feb. 27, 1877	842	262	11	742
Roofing	L. Peirce	197,170	Nov. 13, 1877	459	135	12	834
Roofing composition	J. C. Cheatham	187,748	Feb. 27, 1877	847		11	343
Roofing, Fire-proof	J. W. Hoyt	187,140	Feb. 6, 1877	212	69	11	232
Roofing, Fire-proof metallic	A. C. De La Martelliere	190,834	May 15, 1877	746		11	860
Roofing material	C. M. Warren	191,208	May 22, 1877	1129		11	919
Roofing, Sheet-metal	H. W. Smith	188,079	Mar. 6, 1877	115	34	11	396
Roofing-tile	J. W. Hoyt	195,607	Sept. 25, 1877	875	260	12	548
Roofing-tile	P. Pointon	192,451	June 26, 1877	985	296	11	1135
Roofing-tile	P. Pointon	198,414	Dec. 18, 1877	752	221	12	1067
Roofing-tile	H. Stripe	196,773	Nov. 6, 1877	35	10	12	766
Roofing-tile machine	J. Greenawalt	188,291	Mar. 13, 1877	333	105	11	431
Rope-clamp	J. H. Caler and D. Powell	189,019	Apr. 3, 1877	9	3	11	560
Rope-clamp	H. T. Smith	189,274	Apr. 3, 1877	242	81	11	590
Rope, Light-weight	A. D. Leday	198,031	Dec. 11, 1877	327	101	12	1002
Rope-machine	D. Whiton, W. Thomas, and C. F. Hough.	192,317	June 19, 1877	841	255	11	1103
Rope-making machine	L. E. Higby	189,099	Apr. 3, 1877	78	28	11	569
Rope or cordage, Mechanism for winding and reeling.	B. Bevelander	190,811	May 15, 1877	725	215	11	857
Rope or cordage, Stand or reel for	D. M. Haight	187,271	Feb. 13, 1877	253	112	11	262
Ropes, belts, &c., Tightening and stretching	W. Eppelsheimer	193,939	Aug. 7, 1877	141	43	12	254
Rotary-disk steam-engine	G. R. Winkler	194,281	Aug. 14, 1877	510	154, 155	12	309
Rotary engine	P. D. M. Carmichael	187,215	Feb. 13, 1877	298	97	11	255
Rotary engine	S. R. Cleveland	185,850	Jan. 2, 1877	36	11	11	13

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Rotary engine	L. D'Auria	187,602	Feb. 20, 1877	685	213	11	314
Rotary engine	J. Davenport	193,229	July 17, 1877	697	213	12	122
Rotary engine	D. R. Harder	186,342	Jan. 16, 1877	537	162, 163	11	94
Rotary engine	N. W. Holt	186,008	Jan. 9, 1877	199	61	11	44
Rotary engine	P. A. and I. S. Knapp	187,539	Feb. 20, 1877	629	195	11	306
Rotary engine	G. Lilly	193,338	July 24, 1877	828	254	12	148
Rotary engine	A. S. Lyman	187,154	Feb. 6, 1877	223	73	11	233
Rotary engine	P. B. Martin	195,032	Sept. 11, 1877	285	87	12	447
Rotary engine	J. Moorhouse	195,630	Sept. 25, 1877	895	266	12	551
Rotary engine	N. Nilson	190,067	Apr. 24, 1877	1105	336	11	726
Rotary engine	M. Nordmaon, jr.	191,250	May 29, 1877	1185	355, 356	11	935
Rotary engine	A. F. W. Partz	196,038	Oct. 9, 1877	361	103	12	620
Rotary engine	F. Pasquale and P. G. B. Zanini	188,752	Mar. 27, 1877	802	245	11	513
Rotary engine	R. W. Skirrow	187,326	Feb. 13, 1877	412	129	11	270
Rotary engine	J. Slavik	196,996	Nov. 13, 1877	278	82	12	807
Rotary engine	T. F. Sparrow	190,923	May 15, 1877	832	246, 247	11	871
Rotary engine	J. C. Thomas	186,771	Jan. 30, 1877	967	300, 301	11	173
Rotary engine	R. Vaile	192,547	June 26, 1877	1082	326, 327	11	1147
Rotary engine	H. I. Willson	187,208	Feb. 6, 1877	268	88	11	239
Rotary engine	H. G. Wood	187,211	Feb. 6, 1877	271	89	11	239
Rotary engine and pump	O. Elgass	195,353	Sept. 18, 1877	619	183	12	503
Rotary steam-engine	W. R. Rightor	198,214	Dec. 18, 1877	531	164, 165	12	1038
Rotary steam-engine	A. L. Scudder and J. L. Wager	190,785	May 15, 1877	705	208	11	854
Rotary steam-engine	W. C. Thompson	196,268	Oct. 16, 1877	614	176, 177	12	662
Rouge paste, Composition	B. L. Budd	190,126	May 1, 1877	15		11	748
Roundabout	F. Millward	198,659	Dec. 25, 1877	982	299	12	1113
Roundabout	H. H. Hawthorne	196,753	Nov. 6, 1877	18	5	12	763
Roving frame, Worsted	H. N. Craven	196,787	Nov. 6, 1877	49	15	12	767
Rowlock	J. J. Currier	191,752	June 12, 1877	236	75	11	1013
Rowlock	P. A. Danielson	190,131	May 1, 1877	19	5	11	749
Rowlock	N. S. Graves	186,005	Jan. 9, 1877	197	69	11	43
Rowlock	R. W. Hathaway	187,227	Feb. 13, 1877	309	100	11	256
Rowlock	T. S. Popplewell	189,135	Apr. 3, 1877	106	38	11	573
Rowlock	W. Spelman	190,793	May 15, 1877	711	210	11	854
Rowlock, Adjustable	W. B. Padgett	196,163	Oct. 16, 1877	502	146	12	648
Rubber articles, Process and apparatus for forming	C. E. Longden	185,939	Jan. 2, 1877	131	39	11	25
Rubber, Hand	H. Carter	187,811	Feb. 27, 1877	914	284	11	352
Rubber, Machinery for cutting continuous sheets of	T. A. Richards	198,684	Dec. 25, 1877	1004	305	12	1116
Rudder-chock for vessels	C. M. Tarr	196,602	Oct. 30, 1877	971	282	12	733
Rule-bevel	J. C. Rorick	192,017	June 12, 1877	498	153	11	1047
Ruler and letter-scales, Combined	G. D. Wyckoff	193,744	July 31, 1877	1240	372	12	215
Ruler, Parallel	J. Gardam	192,161	June 19, 1877	667	204	11	1081
Ruler, Parallel	E. J. Towne	187,330	Feb. 13, 1877	416	130	11	271
Rulers, Attachment to parallel	H. K. Averill, jr.	195,693	Oct. 2, 1877	2	1	12	561
Ruling-machine	J. McAdams	192,444	June 26, 1877	979	294	11	1134
Ruling-machine, Paper	W. O. Hickok and A. Cooper	194,497	Aug. 21, 1877	740	220, 221	12	347
Ruling machine, Paper	J. T. F. McDonnell	195,938	Oct. 9, 1877	262	73	12	605
Running-gear	M. Atwood	191,017	May 22, 1877	951	282	11	894
S.							
Saccharine composition sirup	H. B. Blackwell	187,747	Feb. 27, 1877	847		11	343
Saccharine juices, Clarifying	H. W. Walker and T. L. Patterson	195,190	Sept. 11, 1877	450		12	472
Saccharine solutions, Apparatus and processes for manufacturing purified.	A. Manbré	187,881	Feb. 27, 1877	979	304	11	361
Sack-holder	J. S. Covert	194,584	Aug. 28, 1877	830	247	12	368
Sack-holder and sack-filler combined	F. Sondermeyer and F. Schindler	186,892	Jan. 30, 1877	1092	338	11	189
Sack-packer	H. A. Barnard	197,590	Nov. 27, 1877	916	273	12	918
Sad and fluting iron combined	C. C. Burke	194,644	Aug. 28, 1877	879	264	12	376
Sad-iron	O. Avery, jr.	198,530	Dec. 25, 1877	857	261	12	1094
Sad-iron	J. G. Baker and T. H. Asbury	186,291	Jan. 16, 1877	470	145	11	86
Sad-iron	D. A. Barnes	197,958	Dec. 11, 1877	258	79	12	992
Sad-iron	S. J. Bugh	189,602	Apr. 17, 1877	608	188	11	654
Sad-iron	W. B. Dolsen and J. B. Sherwood	197,768	Dec. 4, 1877	63	21	12	955
Sad-iron	T. H. McCaffrey	191,873	June 12, 1877	354	109	11	1028
Sad-iron	L. Passmore	196,763	Nov. 6, 1877	26	8	12	764
Sad-iron	F. M. Snively	192,197	June 19, 1877	703	215	11	1086
Sad-iron	H. L. Wells	191,908	June 12, 1877	385	120	11	1032
Sad-iron	C. H. Westphal	186,697	Jan. 30, 1877	900	278	11	164
Sad-iron heater	W. H. Haylock	191,340	May 29, 1877	1263	381	11	945
Sad-iron heater	J. B. Woolsey	194,284	Aug. 14, 1877	516	156	12	309
Sad-iron holder	J. R. Claxton	191,935	June 12, 1877	413	128	11	1036
Sad-iron holder	R. Lanstrom	193,451	July 24, 1877	935	284	12	163
Sad-iron holder	W. Reinhard	197,173	Nov. 13, 1877	461	136	12	835
Sad-iron stand and scourer	F. Raymond	194,371	Aug. 21, 1877	612	184	12	3 0
Saddle	H. Rnwart	188,961	Mar. 27, 1877	1019	313	11	542
Saddle-bag, Physician's	C. R. Suter and E. E. Furney	193,288	July 17, 1877	760	234	12	131
Saddle, Gig	J. M. Gwinnell	198,609	Dec. 25, 1877	930	283	12	1105
Saddle, Harness	J. F. Best	191,917	June 12, 1877	395	123	11	1033
Saddle, Harness	E. R. Cahoone	193,749	July 31, 1877	1244	374	12	216
Saddle, Harness	E. R. Cahoone and N. Teas	191,829	June 12, 1877	317	98	11	1023
Saddle, Harness	A. Gilliam	198,510	Dec. 25, 1877	840	256	12	1091
Saddle, Harness	A. Gilliam	198,511	Dec. 25, 1877	841	256	12	1092
Saddle, Harness	J. M. Gwinnell	198,608	Dec. 25, 1877	929	283	12	1105
Saddle, Harness	L. C. Pepper and B. Gephart	194,460	Aug. 21, 1877	704	210	12	342
Saddle, Harness	S. E. Tompkins	186,772	Jan. 30, 1877	969	301	11	173

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Saddle, Harness	S. E. Tompkins	197,064	Nov. 13, 1877	346	102	12	818
Saddle loop, Harness	E. P. Monteith and G. V. Mesick	190,891	May 15, 1877	800	237	11	866
Saddle pad, Harness	J. F. Knorr	191,977	June 12, 1877	458	141	11	1042
Saddle pad, Harness	W. Thompson	187,568	Feb. 20, 1877	652	203	11	309
Saddle, Riding	J. C. Miller	186,359	Jan. 16, 1877	555	169	11	96
Saddle-tree	H. C. and J. R. Still	195,415	Sept. 18, 1877	679	201	12	512
Saddle tree, Gig	W. H. Taylor	195,856	Oct. 2, 1877	166	46	12	584
Saddle tree, Harness	W. H. Bustin	186,461	Jan. 23, 1877	673	206	11	124
Saddle tree, Harness	W. L. Frizzell	191,525	June 5, 1877	16	5	11	978
Saddle tree, Harness	J. Huber	198,619	Dec. 25, 1877	940	287	12	1107
Saddle tree, Harness	J. McCormick	189,946	Apr. 24, 1877	969	297	11	710
Saddle tree, Harness	J. L. Scholl	195,848	Oct. 2, 1877	156	44	12	583
Saddler's trimming-tool	M. M. Sulgrove	192,845	July 10, 1877	318	93	12	63
Safe, Alarm	J. B. Kingham	195,219	Sept. 18, 1877	492	145	12	485
Safe and vault	J. G. Taylor and C. D. Williams	193,293	July 17, 1877	765	235	12	131
Safe and vault doors, Bolting mechanism for	H. R. Towne	194,274	Aug. 14, 1877	503	152	12	308
Safe and vault doors, Spindle for	J. White	196,173	Oct. 16, 1877	512	149	12	649
Safe, Burglar-proof	R. Neumann	185,832	Jan. 2, 1877	19	6	11	11
Safe, Burglar-proof	A. T. Woodward	190,400	May 1, 1877	289	85	11	784
Safe-door, Burglar-proof	H. Herman	187,708	Feb. 27, 1877	810	251	11	338
Safe-doors, Locking device for	R. Heneage	194,349	Aug. 21, 1877	595	178	12	327
Safe, Fire and burglar proof	H. Urban and G. Berkmyer	196,608	Oct. 30, 1877	975	283	12	734
Safe, Fire-proof	W. H. Butler	188,775	Mar. 27, 1877	833	253	11	516
Safe, Fire-proof	C. A. Saxe and J. S. Harding	191,550	June 5, 1877	42	12	11	982
Safe, Fire-proof	J. E. Schonacker	194,470	Aug. 21, 1877	716	213	12	343
Safe, Fire-proof	H. Urban	196,725	Oct. 30, 1877	1090	317	12	749
Safe-lock arbor	H. Urban	198,324	Dec. 18, 1877	641	195	12	1054
Safe, Marine	T. P. Rowland	195,954	Oct. 9, 1877	277	78	12	608
Safe, Moth-proof	A. H. Clark	187,356	Feb. 13, 1877	441	138	11	274
Safe, Provision	J. Walter	197,505	Nov. 27, 1877	829	247	12	906
Safe, Provision	E. Webb	189,159	Apr. 3, 1877	127	45	11	576
Safety apparatus and damper-regulator, Combined	A. W. Cram	197,831	Dec. 4, 1877	125	38	12	964
Safety-hook	W. E. Murray	193,773	July 31, 1877	1274	383	12	220
Safety-pin	W. A. Butler	190,281	May 1, 1877	168	49	11	768
Safety-pin	J. Jenkins	195,825	Oct. 2, 1877	132	38	12	580
Safety-pin	P. Miles	193,125	July 17, 1877	595	179	12	108
Safety-pin shield	W. A. Butler	189,425	Apr. 10, 1877	419	132	11	621
Safety-pins, Machinery for making	W. A. Butler and W. Wellge	195,978	Oct. 9, 1877	302	84	12	611
Safety-pins, Machinery for sharpening	W. A. Butler and W. Wellge	195,791	Oct. 2, 1877	95	28	12	575
Sagger-pin machine	I. W. Knowles	185,828	Jan. 2, 1877	15	5	11	11
Sail-hank	A. Méhu	191,359	May 29, 1877	1278	386	11	947
Sails, Clewing up gaff-top	W. H. Dare	190,831	May 15, 1877	744	221	11	859
Sails, Reefing	O. W. Atwood	188,491	Mar. 20, 1877	544	167	11	468
Sal ammoniac and sulphate of soda or potash, Manufacture of.	C. Lennig	196,464	Oct. 23, 1877	814		12	700
Salt-boiler rake	J. E. Secord	188,680	Mar. 20, 1877	721	221	11	493
Salt-bottle	C. P. Crossman	196,076	Oct. 16, 1877	410	119	12	635
Salt-cellar and napkin-holder	T. R. Timby	198,435	Dec. 18, 1877	751	227	12	1070
Salt-vessel	R. Dunham	188,240	Mar. 13, 1877	287	90	11	425
Salt-water evaporator	H. C. Bowers	188,576	Mar. 20, 1877	620	192	11	480
Sampling-package	W. P. Groom	195,816	Oct. 2, 1877	123	35	12	578
Sand-band	S. C. Wharton	197,436	Nov. 20, 1877	740	221	12	885
Sand-conveyer	R. C. Garcia	193,155	July 17, 1877	617	187	12	112
Sand-drier	J. Maguire	195,717	Oct. 2, 1877	29	9	12	564
Sand-paper or emery-cloth to utilize the same, Treating worn-out.	R. Glover	194,235	Aug. 14, 1877	465	141	12	303
Sand-papering machine	J. P. Beck	191,640	June 5, 1877	122	37	11	992
Sap-boiling pan	O. B. Huggins	197,373	Nov. 20, 1877	677	202	12	875
Sap-spout	F. E. Lord	195,295	Sept. 18, 1877	570	166	12	496
Sap-spout	E. Willis	189,330	Apr. 10, 1877	332	106	11	609
Sash and door guide	J. H. Beard	197,813	Dec. 4, 1877	106	33	12	961
Sash-balance	J. C. Anderson	198,179	Dec. 18, 1877	494	153	12	1033
Sash-balance	W. Cashner	192,680	July 3, 1877	135	37	12	30
Sash-balance	F. Eichenlaub and J. Gabriel	186,549	Jan. 23, 1877	753	231	11	134
Sash-balance	J. Houriet	187,857	Feb. 27, 1877	960	298	11	358
Sash-balance	A. Kolb and C. Osbergbaus	189,107	Apr. 3, 1877	84	30	11	570
Sash-balance	A. Kolb and C. Osbergbaus	192,438	June 26, 1877	975	293	11	1134
Sash-balance	B. F. McCune	189,317	Apr. 10, 1877	319	100	11	608
Sash-balance	W. Milner	198,548	Dec. 25, 1877	872	266	12	1096
Sash-balance	N. J. Skaggs	192,024	June 12, 1877	505	154	11	1048
Sash balance	D. F. Stambaugh and W. A. Smith.	188,432	Mar. 13, 1877	476	147	11	450
Sash clamping and squaring machine	J. Collins	190,554	May 8, 1877	456	135	11	813
Sash-cord fastener	N. Holmes	189,560	Apr. 17, 1877	567	176	11	649
Sash, doors, &c., Machine for relishing the rails of	G. W. Maher	197,646	Nov. 27, 1877	973	{289 290	12	926
Sash-fastener	H. P. Andrews	192,614	July 3, 1877	60	17	12	20
Sash-fastener	J. Andrews	192,959	July 10, 1877	420	126	12	78
Sash-fastener	W. H. Brown	192,896	July 10, 1877	362	107	12	69
Sash-fastener	B. Bush	198,345	Dec. 18, 1877	662	201	12	1057
Sash-fastener	F. Caspar	196,630	Oct. 30, 1877	996	290	12	737
Sash-fastener	A. Chamberlin	191,403	May 29, 1877	1316	399	11	952
Sash-fastener	H. L. Clark and A. B. Smith	194,804	Sept. 4, 1877	51	17	12	407
Sash-fastener	D. M. Cole	187,514	Feb. 20, 1877	608	189	11	303
Sash-fastener	A. Cummings	196,635	Oct. 30, 1877	1000	291	12	737
Sash-fastener	W. T. Doremus	189,088	Apr. 3, 1877	68	25	11	568
Sash-fastener	C. Eberly	197,257	Nov. 20, 1877	561	166	12	857
Sash-fastener	A. Ekerman	188,112	Mar. 6, 1877	144	43	11	400
Sash-fastener	F. M. Faircloth, jr	198,094	Dec. 11, 1877	388	121	12	1011
Sash-fastener	O. F. Fogelstrand	197,026	Nov. 13, 1877	308	92	12	812
Sash-fastener	M. Foster	187,263	Feb. 13, 1877	315	110	11	261
Sash-fastener	D. T. Gerrish	192,428	June 26, 1877	963	289	11	1132
Sash-fastener	W. M. Griscom	197,848	Dec. 4, 1877	140	43	12	966

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Sash-fastener	F. A. Grove	197, 355	Nov. 20, 1877	660	196	12	873
Sash-fastener	W. E. Hammond	196, 662	Oct. 30, 1877	1030	299	12	741
Sash-fastener	J. Hatzl	190, 214	May 1, 1877	101	29	11	759
Sash-fastener	C. E. Hicks	190, 759	May 15, 1877	683	203	11	851
Sash-fastener	F. J. Hoyt	187, 141	Feb. 6, 1877	213	69	11	282
Sash-fastener	F. J. Hoyt	192, 919	July 10, 1877	382	113	12	72
Sash-fastener	W. P. Hudson	196, 806	Nov. 6, 1877	66	20	12	770
Sash-fastener	H. Jones	189, 106	Apr. 3, 1877	83	30	11	570
Sash-fastener	O. S. Judd	194, 825	Sept. 4, 1877	70	23	12	410
Sash-fastener	T. F. Keating and W. H. Taylor	186, 137	Jan. 9, 1877	321	98	11	59
Sash-fastener	W. Kemp, jr	190, 221	May 1, 1877	107	31	11	760
Sash-fastener	E. Leverich	193, 124	July 17, 1877	594	179	12	108
Sash-fastener	N. M. Miller	195, 223	Sept. 18, 1877	497	146	12	486
Sash-fastener	S. G. Monce	191, 609	June 5, 1877	90	28	11	989
Sash-fastener	E. Parker	192, 080	June 19, 1877	586	178	11	1071
Sash-fastener	H. R. Parrott	197, 401	Nov. 20, 1877	705	211	12	879
Sash-fastener	L. Patterson	193, 992	Aug. 7, 1877	192	58	12	260
Sash-fastener	C. W. Penfield	190, 074	Apr. 24, 1877	1114	338	11	727
Sash-fastener	R. H. and G. H. Randall	198, 250	Dec. 18, 1877	583	176	12	1045
Sash-fastener	M. H. Rison	195, 402	Sept. 18, 1877	667	197	12	510
Sash-fastener	D. S. Roberts	187, 316	Feb. 13, 1877	401	127	11	269
Sash-fastener	S. Rush	192, 529	June 26, 1877	1065	321	11	1145
Sash-fastener	J. H. Schlott	190, 451	May 8, 1877	355	103	11	801
Sash-fastener	T. Stuart	191, 383	May 29, 1877	1297	393	11	950
Sash-fastener	M. N. Ward	197, 702	Nov. 27, 1877	1041	312	12	934
Sash-fastening	W. E. Sparks	189, 145	Apr. 3, 1877	115	42	11	575
Sash-holder	J. Chandler	197, 330	Nov. 20, 1877	637	188	12	868
Sash-holder	G. W. Clark	192, 231	June 19, 1877	740	226	11	1091
Sash-holder	Z. Curtis	196, 140	Oct. 16, 1877	485	140	12	645
Sash-holder	E. M. Dever	194, 512	Aug. 28, 1877	767	227	12	359
Sash-holder	V. Freeman	196, 002	Oct. 9, 1877	325	92	12	615
Sash-holder	H. C. Gladding	188, 511	Mar. 20, 1877	563	173	11	471
Sash-holder	D. O. Hink	197, 552	Nov. 27, 1877	880	261	12	913
Sash-holder	R. Holcroft	189, 040	Apr. 3, 1877	28	9	11	562
Sash-holder	R. B. Hugunin	196, 804	Nov. 6, 1877	66	20	12	770
Sash-holder	L. Jones and J. Stroud	1 9, 940	Apr. 24, 1877	965	295	11	709
Sash-holder	L. Jones and J. Stroud	197, 277	Nov. 20, 1877	581	172	12	860
Sash-holder	D. F. Keeffe	196, 153	Oct. 16, 1877	495	144	12	646
Sash-holder	B. Mason, jr., and E. J. Smith	187, 159	Feb. 6, 1877	228	74	11	234
Sash-holder	E. Mead	196, 690	Oct. 30, 1877	1055	306	12	744
Sash holder	I. Scoville	196, 993	Nov. 13, 1877	275	81	12	807
Sash-holder	A. W. Sperry	194, 881	Sept. 4, 1877	123	38	12	417
Sash-holder	G. L. Waitt	194, 487	Aug. 21, 1877	731	218	12	345
Sash-holder	L. R. Witherell	191, 215	May 22, 1877	1136	341	11	920
Sash holder, Window	J. Kelly	188, 375	Mar. 13, 1877	421	131	11	443
Sash lift and fastener, Combined	C. Levis	186, 140	Jan. 9, 1877	324	99	11	60
Sash lift and fastener, Combined	W. E. Sparks	188, 311	Mar. 13, 1877	353	111	11	434
Sash lift and lock	E. Parker	196, 697	Oct. 30, 1877	1063	309	12	745
Sash, Metallic window	J. T. Harris	197, 124	Nov. 13, 1877	412	121 122	12	828
Sash-relishing machine	W. H. Fisher	185, 907	Jan. 2, 1877	92	28	11	20
Sash, Window	L. Landeker	190, 225	May 1, 1877	110	32	11	761
Sash, Window	J. Petri	189, 384	Apr. 10, 1877	376	121	11	616
Satchel	C. Noll	197, 656	Nov. 27, 1877	981	298	12	928
Satchel, &c., lock	R. Flocke	192, 327	June 26, 1877	868	262	11	1119
Satchel, &c., lock	W. Roemer	190, 907	May 15, 1877	817	241	11	869
Sausage-stuffer	I. W. Heysinger	192, 996	July 10, 1877	452	136	12	82
Sausage-stuffer	W. R. Hock	195, 605	Sept. 25, 1877	873	260	12	548
Saw	J. T. James	195, 610	Sept. 25, 1877	878	261	12	548
Saw	W. P. Miller	190, 062	Apr. 24, 1877	1100	335	11	726
Saw	C. J. Wilson	193, 740	July 31, 1877	1237	371	12	215
Saw	C. J. Wilson	196, 850	Nov. 6, 1877	115	34	12	777
Saw-blades, Manufacturing	J. A. House	190, 142	May 1, 1877	28	8, 9	11	750
Saw-buck attachment	H. C. Emery	194, 229	Aug. 14, 1877	459	139	12	303
Saw, Circular	H. Disston	192, 240	June 19, 1877	751	229	11	1092
Saw, Circular	D. B. McRae	193, 985	Aug. 7, 1877	187	56	12	259
Saw, Circular	S. N. Pool, jr	192, 526	June 26, 1877	1062	320	11	1144
Saw, Circular	E. W. Tilton	191, 198	May 22, 1877	1116	334	11	917
Saw, Circular	E. W. Tilton	197, 688	Nov. 27, 1877	1008	301	12	932
Saw-cooling device	F. McDonough	195, 636	Sept. 25, 1877	893	265	12	550
Saw-feeder	J. G. Cofman	194, 581	Aug. 28, 1877	828	246	12	368
Saw-filing machine	A. Martin	185, 863	Jan. 2, 1877	48	15	11	15
Saw-filing machine	S. V. Pattillo	189, 646	Aug. 17, 1877	646	201	11	659
Saw-filing machine, Gin	M. M. Beard	192, 217	June 19, 1877	722	221	11	1089
Saw-filing machine, Gin	A. S. Eastham	193, 492	July 24, 1877	973	295	12	168
Saw-filing machine, Gin	W. J. Johnson	197, 276	Nov. 20, 1877	580	171	12	860
Saw-filing machine, Gin	P. O'Neill	197, 793	Dec. 4, 1877	89	27	12	958
Saw-frame attachment	G. W. Higgins	196, 801	Nov. 6, 1877	65	19	12	770
Saw-gage	F. T. Grogan	198, 458	Dec. 25, 1877	788	239	12	1084
Saw gage, Gang	T. Emery	191, 799	June 12, 1877	279	87	11	1019
Saw-grinder	E. P. Terrell	189, 522	Apr. 10, 1877	506	160	11	633
Saw-grinder	E. P. Terrell	197, 298	Nov. 20, 1877	599	178	12	863
Saw-guide	J. N. Babb	194, 027	Aug. 14, 1877	248	73	12	275
Saw-guide	W. Collins	192, 683	July 3, 1877	137	38	12	31
Saw-guide	E. Myers and S. R. Smith	197, 163	Nov. 30, 1877	450	133	12	833
Saw-guide, Adjustable	G. W. Baker	189, 416	Apr. 10, 1877	410	129	11	620
Saw guide, Circular	C. I. Chaffee	186, 541	Jan. 23, 1877	745	228	11	133
Saw-guide for cutting miters, &c	J. B. Currier	191, 659	June 5, 1877	140	44	11	995
Saw-gummer	R. M. Leftwich and J. W. Crossley	190, 599	May 8, 1877	497	148	11	819
Saw-gummer	J. M. Smith	187, 921	Feb. 27, 1877	1023	315	11	366
Saw, Hand	C. Disston	186, 814	Jan. 30, 1877	1010	314	11	179
Saw, Hand	L. Shave and S. Y. Reams	190, 914	May 15, 1877	824	243	11	869
Saw-handle	H. Disston and J. H. Vandegrift	194, 659	Aug. 28, 1877	895	267	12	378

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Saw-handle	J. N. Dudley and J. Anderson	197,256	Nov. 20, 1877	560	165	12	857
Saw handle, Cross cut	E. C. Atkins	195,740	Oct. 2, 1877	51	15	12	568
Saw handle, Cross cut	P. Gerlach	190,574	May 8, 1877	474	141	11	816
Saw handle, Cross cut	B. F. Moss and J. D. Abbott	198,663	Dec. 25, 1877	987	300	12	1113
Saw handle, Cross cut	C. A. Root	194,052	Aug. 14, 1877	272	81	12	278
Saw handles, Attaching cross cut	C. A. Sands	189,960	Apr. 24, 1877	983	300	11	711
Saw handles, Attaching cross cut	C. F. Spooner	190,522	May 8, 1877	425	124	11	810
Saw, Jig	L. T. T. Stanley	191,189	May 22, 1877	1107	331	11	915
Saw-mill adjustable gage	F. Wheeler	193,202	July 17, 1877	659	201	12	118
Saw-mill, Band	W. H. Doane and G. W. Bugbee	194,225	Aug. 14, 1877	451	137, 138	12	302
Saw-mill, Band	J. R. Hoffman	192,917	July 10, 1877	380	113	12	72
Saw-mill carriages, Operating	M. Lally	187,870	Feb. 27, 1877	971	301	11	359
Saw mill, Circular	O. L. Jenks	193,004	July 10, 1877	459	138, 139	12	83
Saw mill, Circular	F. Strobel and C. M. Idleman	195,416	Sept. 18, 1877	680	201	12	512
Saw-mill dog	A. Cunningham	192,817	July 10, 1877	289	84	12	59
Saw-mill dog	G. W. Rodebaugh	196,102	Oct. 16, 1877	439	128	12	639
Saw-mill dog	H. Snyder	192,795	July 3, 1877	239	69	12	44
Saw mill, Gang	D. J. Marston	186,742	Jan. 30, 1877	938	291	11	169
Saw-mill guide	F. A. and C. W. Olds	198,208	Dec. 18, 1877	525	162	12	1037
Saw-mill head-block	H. Cleghorn	191,931	June 12, 1877	409	127	11	1035
Saw-mill head-block	C. A. Hege	196,577	Oct. 30, 1877	948	274	12	729
Saw-mill head-block	A. Rodgers	192,015	June 12, 1877	496	152	11	1046
Saw mill, Muley	T. E. Chandler	190,822	May 15, 1877	737	218	11	858
Saw-mill set-work	J. A. Robb	195,650	Sept. 25, 1877	916	273	12	554
Saw-mills, Friction-wheel for	A. Rodgers	192,016	June 12, 1877	497	152	11	1047
Saw-mills, Log-turner for	J. Orm	189,379	Apr. 10, 1877	371	120	11	615
Saw-mills, Set-gear for	H. Gawley	192,576	July 3, 1877	22	7	12	15
Saw mills, Set-work for circular	C. M. Hall	187,622	Feb. 20, 1877	709	220	11	316
Saw, Planing	L. S. and C. N. Brown	197,325	Nov. 20, 1877	634	187	12	868
Saw, Scroll	J. A. House	189,461	Apr. 10, 1877	452	142	11	625
Saw-set	G. W. Bugbee	198,077	Dec. 11, 1877	368	115	12	1009
Saw-set	G. S. Grier	186,127	Jan. 9, 1877	312	95	11	58
Saw-set	C. Heinen	186,250	Jan. 16, 1877	435	134	11	82
Saw-set	C. Heinen	192,991	July 10, 1877	448	135	12	82
Saw-set	C. B. Hopkins	189,736	Apr. 17, 1877	743	228	11	671
Saw-set	W. H. Smerdon and B. F. Phillips	190,521	May 8, 1877	424	124	11	809
Saw-set	C. H. Turver	190,647	May 8, 1877	554	165	11	827
Saw-set and file-guide	H. C. Root	193,182	July 17, 1877	641	195	12	116
Saw-setting machine	D. W. Turner	187,940	Feb. 27, 1877	1039	320	11	368
Saw-sharpener	J. Walsh	189,534	Apr. 10, 1877	521	164	11	635
Saw-sharpener and tooth-gage	G. W. Atkins	193,209	July 17, 1877	673	205	12	119
Saw sharpener, Gin	J. T. Medearis	194,705	Aug. 28, 1877	937	279	12	384
Saw sharpening and setting machine	S. Whitesides	191,212	May 22, 1877	1133	339, 340	11	919
Saw-sharpening machine	J. Murphin	195,633	Sept. 25, 1877	901	268	12	552
Saw-sharpening machine	P. D. Robbins	187,909	Feb. 27, 1877	1013	312	11	365
Saw, Shingle	J. Morreau	198,142	Dec. 11, 1877	439	137	12	1018
Saw-table	G. E. Burt	186,196	Jan. 16, 1877	391	119	11	76
Saw-teeth, Clamp-piece for insertible	W. Burger	195,699	Oct. 2, 1877	8	3	12	562
Saw-teeth, Device for setting, jointing and gaging	L. H. Bigelow	190,539	May 8, 1877	440	129	11	812
Saw-teeth, Insertible	T. S. Disston	189,199	Apr. 3, 1877	163	57	11	581
Saw-teeth, Machine for forming insertible	W. Hawkins	196,800	Nov. 6, 1877	63	19	12	769
Saw-teeth, Machine for setting	A. Boisnet	188,848	Mar. 27, 1877	909	276	11	527
Saw-teeth, Machine for setting	R. Heunsch	193,512	July 24, 1877	994	300	12	171
Saw-tooth	N. W. Spaulding	192,089	June 19, 1877	593	181	11	1072
Saw-tooth	N. W. Spaulding	192,090	June 19, 1877	593	181	11	1072
Saw-tooth adjuster	J. F. Damon	192,903	July 10, 1877	368	109	12	70
Saw, Tubular gang	J. A. Balch	186,293	Jan. 16, 1877	471	145	11	87
Saws, &c., Combined crank and treadle power for driving	H. Shear	195,541	Sept. 25, 1877	813	241	12	539
Saws, Cooling circular	J. F. Milligan	197,650	Nov. 27, 1877	977	291	12	927
Saws, Guide-pulley for band	J. H. Hobson	192,695	July 3, 1877	147	41	12	33
Saws, Hanging circular	F. Hamilton	196,893	Nov. 6, 1877	163	48	12	783
Saws, Machine for manufacturing	J. A. House	190,141	May 1, 1877	26	7, 8	11	750
Saws, Motor for operating crosscut	E. Poincot	195,644	Sept. 25, 1877	911	271	12	553
Saws, Planing attachment to	J. T. James	195,609	Sept. 25, 1877	877	261	12	548
Saws, Tension attachment for scroll	J. R. Vellacott	196,955	Nov. 6, 1877	225	67	12	791
Sawing and grinding hard substances	B. C. Tilghman	187,240	Feb. 13, 1877	322		11	258
Sawing lumber	J. Springer	186,893	Jan. 30, 1877	1093	338	11	189
Sawing-machine	W. F. and J. Barnes	189,681	Apr. 17, 1877	685	211, 212	11	664
Sawing-machine	C. Bliven	190,540	May 8, 1877	441	129, 130	11	812
Sawing-machine	G. J. Kautz	189,628	Apr. 17, 1877	632	196	11	657
Sawing-machine	F. W. Krogh	188,152	Mar. 6, 1877	185	57	11	405
Sawing-machine	J. J. Reinhart and W. Houghton	194,372	Aug. 21, 1877	613	184	12	330
Sawing-machine	M. Rose	189,498	Apr. 10, 1877	485	154	11	630
Sawing-machine	F. Simonson	190,787	May 15, 1877	708	209	11	854
Sawing machine, Band	F. Millward	192,810	July 3, 1877	257	75, 76	12	46
Sawing machine, Circular	F. D. Green	194,237	Aug. 14, 1877	467	141	12	304
Sawing machine, Circular	G. J. Kautz	198,025	Dec. 11, 1877	322	99, 100	12	1001
Sawing machine, Circular	M. Rose	196,707	Oct. 30, 1877	1072	311	12	747
Sawing machine, Circular	J. M. Shaw	194,378	Aug. 21, 1877	617	186	12	331
Sawing machine, Cross cut	H. M. Blohm	186,790	Jan. 30, 1877	990	307	11	176
Sawing machine, Scroll	I. Arthur	188,225	Mar. 13, 1877	274	86	11	423
Sawing machine, Scroll	J. S. Baker	192,480	June 26, 1877	1007	305	11	1138
Sawing machine, Scroll	F. Eisendick	192,686	July 3, 1877	139	39	12	31
Sawing machine, Scroll	J. Glover	196,796	Nov. 6, 1877	58	18	12	769
Sawing machine, Scroll	W. Hinchliffe	193,706	July 31, 1877	1209	363	12	211
Sawing machine, Scroll	J. H. Hopkins	191,239	May 29, 1877	1176	353	11	933
Sawing machine, Scroll	G. E. Lewis	191,765	June 12, 1877	246	78	11	1015

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Sawing machine, Scroll	W. Palen	195,302	Sept. 18, 1877	576	167	12	497
Sawing machine, Scroll	J. W. Penney	192,597	July 3, 1877	40	12	12	18
Sawing machine, Scroll	N. Stafford	198,426	Dec. 18, 1877	744	225	12	1069
Sawing machine, Scroll	G. H. Trnxell	189,527	Apr. 10, 1877	510	161	11	633
Sawing machine, Scroll	W. H. Tufts	193,057	July 10, 1877	514	155	12	90
Sawing machine, Wood	J. A. Chandler	193,395	July 24, 1877	881	269	12	155
Sawing machines, Spreader for wood	D. K. Overhiser	194,259	Aug. 14, 1877	487	147	12	306
Scaffold	J. T. Allen	186,095	Jan. 9, 1877	284	85	11	54
Scaffold	L. Park	185,956	Jan. 2, 1877	145	44	11	27
Scaffold, Folding and adjustable window	C. I. Palmer	194,718	Aug. 28, 1877	951	282	12	385
Scaffold, Roofing	J. A. Goodnough	191,333	May 29, 1877	1258	379	11	945
Scaffolding	A. Blondin	186,451	Jan. 23, 1877	664	203	11	122
Scaffolding	H. J. Caswell	194,802	Sept. 4, 1877	49	16	12	407
Scaffolding	B. J. Potts	186,616	Jan. 23, 1877	818	253	11	143
Scaffolding, Shoe	H. Batt	192,408	June 26, 1877	949	284	11	1129
Scale-beam	H. Benedict and B. A. F. Greer	195,432	Sept. 18, 1877	498	206	12	515
Scale-beam	D. L. Columbia	196,519	Oct. 30, 1877	892	257	12	721
Scale-beam	F. Fairbanks	186,122	Jan. 9, 1877	307	94	11	58
Scale-beam	C. M. Rider	196,703	Oct. 30, 1877	1068	310	12	746
Scale-beams, Apparatus for illuminating	J. W. Wood	191,910	June 12, 1877	387	120	11	1032
Scale-beams, Machine for marking	O. F. Russ	195,654	Sept. 25, 1877	922	274	12	555
Scale-beams, Spider for	A. Montgomery	186,149	Jan. 9, 1877	332	101	11	61
Scale-measure	J. Putnam	190,447	May 8, 1877	350	102	11	800
Scale-pan	E. M. Whyler	192,207	June 19, 1877	713	218	11	1087
Scale top, Platform	E. J. Bliss	193,634	July 31, 1877	1137	341	12	201
Scales, Adjusting device for weighing	F. Fairbanks	198,365	Dec. 18, 1877	683	208	12	1060
Scales, Cart	D. F. Fetter	193,699	July 31, 1877	1204	361	12	210
Scales, Drafting	J. Lyman	187,290	Feb. 13, 1877	371	119	11	265
Scales for weighing, Spring	G. H. Chatillon	196,434	Oct. 23, 1877	784	226	12	696
Scales for weighing, Spring	M. S. Drake	197,618	Nov. 27, 1877	948	281	12	923
Scales for weighing, Spring	R. Ehmer	198,009	Dec. 11, 1877	310	95	12	999
Scales, Grain	P. H. Cherry	187,813	Feb. 27, 1877	916	284	11	352
Scales, Grain-sacking	E. A. Martin	193,768	July 31, 1877	1269	381	12	219
Scales, Pendulum	H. M. Weaver	197,190	Nov. 13, 1877	477	141	12	837
Scales, Platform	R. Ehmer	192,574	July 3, 1877	17	5	12	15
Scales, Platform	F. Fairbanks and L. G. Spencer	195,112	Sept. 11, 1877	370	111	12	460
Scales, Platform	S. H. Hibbard	193,762	July 31, 1877	1261	379	12	218
Scales, Platform	H. T. Lawton	189,475	Apr. 10, 1877	465	146	11	627
Scales, Platform	J. Parnall	193,276	July 17, 1877	747	228, 229	12	129
Scales, Platform	I. Rigdon	189,786	Apr. 17, 1877	793	243, 244	11	678
Scales, Platform	J. J. Verckler	189,976	Apr. 24, 1877	1000	306	11	713
Scales, Platform weighing	C. Onslow	197,489	Nov. 27, 1877	809	241	12	903
Scales, Roof and stock pen for platform	A. E. Karsner	196,152	Oct. 16, 1877	494	143, 144	12	646
Scales, Sack	C. Flanders	189,852	Apr. 24, 1877	880	268	11	697
Scales, Sack	E. A. Martin	190,346	May 1, 1877	227	68	11	776
Scales, Spring	G. H. Chinnock	190,824	May 15, 1877	738	219	11	858
Scales, Weighing	C. L. Bellamy	196,865	Nov. 6, 1877	130	39	12	779
Scales, Weighing	C. L. Crowell	198,575	Dec. 25, 1877	894	273	12	1100
Scales, Weighing	A. Turnbull	193,576	July 24, 1877	1060	318	12	179
Scales, Weighing	H. Willard	188,557	Mar. 20, 1877	601	186	11	477
Scarf	C. Loeb	198,400	Dec. 18, 1877	716	217	12	1065
Scarf	C. C. and D. W. Noyes	197,657	Nov. 27, 1877	982	293	12	928
Scarf	E. Peltz	193,546	July 24, 1877	1030	309	12	175
Scarf-retainer	J. A. Eshleman	193,496	July 24, 1877	977	296	12	169
Scholar's companion	E. W. Smith	185,977	Jan. 2, 1877	163	50	11	30
School desk and settee	J. R. Payne	193,459	July 24, 1877	942	286	12	164
Scissors	A. W. Coates	188,590	Mar. 20, 1877	634	196	11	482
Scissors and shears	L. Harsh	198,297	Dec. 18, 1877	621	188	12	1051
Scissors, Reversible	T. A. Kelly	187,713	Feb. 27, 1877	816	254	11	339
Scoop	E. A. Barnes	186,520	Jan. 23, 1877	722	222	11	131
Scoop	E. A. Barnes	186,521	Jan. 23, 1877	722	222	11	131
Scoop	W. J. Griffiths	192,987	July 10, 1877	444	134	12	81
Scoop	B. F. Pratt	185,961	Jan. 2, 1877	150	45	11	28
Scoop	N. Waterbury	197,914	Dec. 4, 1877	208	63	12	975
Scoop, Grocer's	C. W. Schwanengel	197,673	Nov. 27, 1877	995	297	12	930
Scoop, Grocer's	W. T. Sherer	186,898	Jan. 30, 1877	1089	337	11	188
Scoop, Weighing	M. L. Mery	196,245	Oct. 16, 1877	588	170	12	659
Scourer: *See* Cutlery-scourer. Knife-scourer.							
Scow, Dumping	T. S. Bird and W. Boggs	186,530	Jan. 23, 1877	731	225	11	132
Scraper	I. Robb and B. Selph	187,177	Feb. 6, 1877	243	80	11	235
Scraper and cleaner, Foot	N. Ellis and G. A. Willis	188,612	Mar. 20, 1877	651	202	11	484
Scraper and ditcher	J. Rice	193,893	Aug. 7, 1877	92	29	12	247
Scraper and grader, Road	H. D. Janes	187,467	Feb. 20, 1877	563	174	11	297
Scraper, Boiler-flue	G. H. Noyes	192,786	July 3, 1877	227	66	12	43
Scraper, Box	J. P. Tierney	189,967	Apr. 24, 1877	990	303	11	712
Scraper, Earth-excavating	J. A. Botkin	193,635	July 31, 1877	1138	341	12	201
Scraper, Revolving	N. T. Nichols	186,015	Jan. 9, 1877	207	63	11	45
Scraper, Road	W. Brown, 2d	186,660	Jan. 30, 1877	865	267	11	159
Scraper, Road	J. T. Currier	192,447	June 26, 1877	955	286	11	1130
Scraper, Road	J. H. Edmondson	196,143	Oct. 16, 1877	487	141	12	645
Scraper, Road	S. J. Hayes	198,541	Dec. 25, 1877	867	264	12	1096
Scraper, Road	E. Huber	185,925	Jan. 2, 1877	114	35	11	23
Scraper, Road	L. F. Jefferson	191,287	May 29, 1877	1222	367	11	939
Scraper, Road	J. Maitland	186,941	Feb. 6, 1877	29	11	11	206
Scraper, Road	W. Murphy	187,547	Feb. 20, 1877	636	198	11	307
Scraper, Road	S. Pennock	194,367	Aug. 21, 1877	608	182	12	329
Scraper, Road	P. Schneider, sr	189,324	Apr. 10, 1877	327	103	11	609
Scraper, Road	G. Thatcher	194,386	Aug. 21, 1877	624	188	12	331
Scraper, Road	A. Thompson	192,720	July 3, 1877	164	47	12	35
Scraper, Road	U. and L. L. Thompson	193,297	July 17, 1877	771	236	12	132

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Scraper, Road	J. C. Welsch	187,687	Feb. 20, 1877	765	338	11	324
Scraping-tool	J. Blum	196,623	Oct. 30, 1877	985	288	12	736
Screen: *See* Bird-cage screen. Car-screen. Card-screen. Coal-screen. Fire-screen. Paper-pulp screen. Toilet-screen. Window-screen.							
Screw	J. Plenkharp	188,668	Mar. 20, 1877	711	218	11	492
Screw and nut, Wire	J. T. Bruen	191,304	May 29, 1877	1236	371	11	941
Screw and other blanks, Magnetic holder for feeding.	E. E. Quimby	186,755	Jan. 30, 1877	951	296	11	171
Screw-blanks, Machine for making	S. Vanstone	186,905	Jan. 30, 1877	1103	341, 342	11	190
Screw bolts and nuts, Forming threads on	A. B. Ibbotson and F. J. Talbot	191,968	June 12, 1877	450	139	11	1041
Screw-clamp, Hand	A. M. Schappa	197,672	Nov. 27, 1877	994	297	12	930
Screw-cutting die	S. W. Bi. hop and M. C. Johnson.	187,248	Feb. 13, 1877	331	106	11	259
Screw-cutting die	R. C. Fay	186,037	Jan. 9, 1877	229	68	11	47
Screw-cutting die	M. C. Johnson	195,713	Oct. 2, 1877	22	6	12	764
Screw-cutting die	S. W. Martin	190,059	Apr. 24, 1877	1097	334	11	725
Screw-cutting die	A. J. Smart	186,890	Jan. 30, 1877	1091	337	11	189
Screw-cutting-die chasers, Gage for the manufacture of.	J. J. Grant	192,824	July 10, 1877	297	86, 87	12	61
Screw-cutting-die holder	F. P. Sheldon	197,984	Dec. 11, 1877	284	87	12	995
Screw-cutting-die stock	J. Hochheimer	188,634	Mar. 20, 1877	676	208	11	487
Screw-cutting machine	L. Field	194,962	Sept. 11, 1877	217	67	12	438
Screw-cutting tap and die	J. Schaub	194,469	Aug. 21, 1877	716	213	12	343
Screw-driver	B. L. Budd	190,119	May 1, 1877	6	3	11	747
Screw-driver	A. J. Curtis	192,901	July 10, 1877	367	108	12	70
Screw-driver handle	E. A. Johnson	190,869	May 15, 1877	781	231	11	864
Screw-driver handle	H. Wilkinson	190,459	May 8, 1877	363	105	11	802
Screw-fastening for joints	G. W. Cornell	197,721	Dec. 4, 1877	14	4	12	948
Screw, Jack	W. Guthrie	198,292	Dec. 18, 1877	618	187	12	1050
Screw machine, Wood	A. L. Munson	194,103	Aug. 14, 1877	320	95, 96, 97, 98, 99, 100, 101	12	285
Screw-swaging machine	M. D. Luehrs	194,875	Sept. 4, 1877	117	36	12	417
Screw-tap	J. Cook	196,879	Nov. 6, 1877	150	45	12	781
Screw-tap	M. C. Johnson	188,466	Mar. 20, 1877	521	161	11	405
Screw-tap, Expanding	J. B. Douglas	189,889	Apr. 24, 1877	919	280	11	702
Screw-thread counter	C. C. Coleman	191,315	May 29, 1877	1242	374	11	942
Screw-threaded rods, Manufacture of	S. Vanstone and J. W. Hoard	186,904	Jan. 30, 1877	1102	341	11	190
Screw-threaded stock, Machine for making	S. Vanstone	186,906	Jan. 30, 1877	1105	342	11	190
Screw-threading machine	L. Bollmann	191,826	June 12, 1877	313	97	11	1023
Screw-threading machine	J. A. Sheldon	189,661	Apr. 17, 1877	665	206	11	661
Screw-threading machine	A. H. Siegfried	196,710	Oct. 30, 1877	1076	312	12	747
Screw-threading machine, Metal	H. S. Lansdoll	189,754	Apr. 17, 1877	761	234	11	673
Screw-threading machine, Metal	S. L. Worsley	197,070	Nov. 13, 1877	352	104	12	819
Screw, Wood	H. A. Harvey	197,933	Dec. 11, 1877	234	71	12	988
Screw, Wood	E. S. Pierce	196,309	Oct. 23, 1877	668	193	12	679
Screw-wrench	E. T. Barlow	198,264	Dec. 18, 1877	595	180	12	1047
Screws, Machine for making wood	E. E. Quimby	186,754	Jan. 30, 1877	947	294, 295	11	171
Screws, Machine for manufacture of	T. Rickett	188,949	Mar. 27, 1877	1005	308, 309	11	540
Screws, Machine for manufacture of	W. C. Stiff and A. Bowen	192,796	July 3, 1877	240	70	12	44
Scrubbing-machine	P. Byrne, jr	189,426	Apr. 10, 1877	420	132	11	621
Scythe	G. Bishop	193,916	Aug. 7, 1877	115	36	12	250
Scythe-fastener	F. Ludden	189,565	Apr. 17, 1877	571	177	11	650
Scythe-shanks, Socket for	M. Smith	186,218	Jan. 16, 1877	409	125	11	78
Scythe-snath fastening	M. Smith	189,275	Apr. 3, 1877	243	81	11	591
Seal-bolt	A. F. Whiting	188,997	Mar. 27, 1877	1048	323	11	546
Seal-bolt	G. S. Winslow	193,741	July 31, 1877	1238	372	12	215
Seal, Bung	A. Wood	186,187	Jan. 9, 1877	373	114	11	66
Seal for bottles and jars, Composition	C. M. Jacob	190,865	May 15, 1877	777		11	863
Seal-lock	H. D. Barnes	195,474	Sept. 25, 1877	752	222	12	530
Seal-lock	L. D'Auria	197,342	Nov. 20, 1877	650	192	12	871
Seal-lock	F. J. Kimball	192,767	July 3, 1877	207	59, 60	12	41
Seal lock	F. J. Kimball	192,768	July 3, 1877	209	60, 61	12	41
Seal-lock	J. N. Smith	189,582	Apr. 17, 1877	590	182	11	652
Seal, Metallic	E. J. Brooks	192,735	July 3, 1877	175	51	12	37
Seal, Metallic	H. Clarke	193,320	July 24, 1877	811	249	12	146
Seal, Metallic	F. A. Ferris	191,328	May 29, 1877	1254	378	11	944
Seal, Metallic	F. C. Hamilton	192,504	June 26, 1877	1038	312	11	1141
Seal, Metallic	W. W. Johnson	193,709	July 31, 1877	1212	363	12	211
Seal, Metallic	E. A. Locke	187,396	Feb. 13, 1877	477	149	11	279
Seal, Metallic	C. G. Schneider	186,170	Jan. 9, 1877	352	108	11	64
Seal-skins, Treatment of	J. Kokcsch	195,826	Oct. 2, 1877	133		12	580
Seals, Machine for compressing and stamping lead.	W. D. Doremus	194,226	Aug. 14, 1877	455	138	12	302
Sealing device for bottles, jars, &c	C. L. Darby	191,519	June 5, 1877	10	3	11	978
Sealing-press	S. R. Dummer	187,524	Feb. 20, 1877	617	191	11	304
Sealing-wax or rosin for use, Form of	C. F. Hermann	190,681	May 15, 1877	606		11	841
Seaming-machine	W. Hipperling	188,633	Mar. 20, 1877	674	208	11	487
Seaming machine, Pipe-elbow	G. Choate	196,785	Nov. 6, 1877	47	15	12	767
Seaming machine, Sheet-metal	T. W. McKeever	192,381	June 26, 1877	923	277	11	1126
Seaming machine, Sheet-metal	J. F. Starr, jr	190,987	May 22, 1877	919	272	11	890
Seaming machine, Sheet-metal roller-	P. A. Whitney	195,066	Sept. 11, 1877	321	97	12	452
Seaming, Roller	F. A. Walsh	196,276	Oct. 16, 1877	622	179	12	663
Seams, Machine for finishing welt	J. G. McCarter and E. L. Wheeler	197,559	Nov. 27, 1877	884	263	12	914
Seams, Re-enforcing shields for	A. Borchardt	192,051	June 19, 1877	559	170	11	1067

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Seat:							
See Car-seat. Carriage-seat. Chair-seat. Convertible seat. Desk-seat. Folding seat. Lawn-seat. Paneled chair-seat. Privy-seat. Reversible seat. Spring-seat. Vehicle-seat. Vehicle spring-seat. Wagon-seat. Water-closet seat.							
Seat, Folding	G. B. Pullinger	188,186	Mar. 6, 1877	222	70	11	409
Sectional boat	F. D. Graves	193,814	Aug. 7, 1877	16	6	12	236
Sedlitz-powders, Machine for putting up	C. R. Doane	190,564	May 8, 1877	463	137, 138	11	815
Seed-drill	H. L. Brown	191,565	June 5, 1877	53	16	11	983
Seed-drill	J. H. Sale	187,913	Feb. 27, 1877	1016	313	11	365
Seed-drill and fertilizer	B. Kuhns, C. Scholz, and D. Y. Kuhns.	191,443	May 29, 1877	1359	411	11	957
Seed-drill and harrow, Combined	T. J. Whitecar	189,821	Apr. 17, 1877	823	254	11	681
Seed-drill, cultivator, harrow, &c., Combined	B. E. Osborn	197,225	Nov. 20, 1877	530	156, 157	12	853
Seed-dropper	L. Francisco	186,670	Jan. 30, 1877	873	270	11	160
Seed-dropper	W. H. Pennal	187,412	Feb. 13, 1877	491	153	11	280
Seeder	O. Perry	187,901	Feb. 27, 1877	1009	309	11	363
Seeder and cultivater, Combined	A. B. Groff	194,757	Aug. 28, 1877	991	291	12	390
Seeder and cultivator, Combined	D. Mack	193,883	Aug. 7, 1877	76	25	12	245
Seeder and cultivator, Convertible	N. Whitehall	187,073	Feb. 6, 1877	147	49	11	223
Seeder and fertilizer	O. Stone	189,516	Apr. 10, 1877	501	159	11	652
Seeder and planter	U. Baldwin and I. T. and W. K. Shumard.	195,742	Oct. 2, 1877	52	16	12	568
Seeding-machine	J. C. Baker	189,679	Apr. 17, 1877	682	211	11	664
Seeding-machine	S. Dixson	191,945	June 12, 1877	425	131	11	1037
Seeding-machine	S. Dixson	191,946	June 12, 1877	426	131	11	1037
Seeding-machine	D. Strunk	191,487	May 29, 1877	1407	425	11	963
Seeding-machine, Force-feed	W. A. Van Brunt and S. E. Davis	195,858	Oct. 2, 1877	167	47	12	585
Seine-boats, Lookout pole for	O. Jones	186,424	Jan. 23, 1877	635	194	11	119
Seine, Fishing	S. B. Howes	194,434	Aug. 21, 1877	678	202	12	338
Self-cleaning rake	V. W. Blanchard	186,300	Jan. 16, 1877	478	147	11	88
Semaphore-lens	C. F. Houghton	187,631	Feb. 20, 1877	717	222	11	317
Semicircular comb	E. W. Smith	195,960	Oct. 9, 1877	284	79	12	609
Separator:							
See Cotton-separator. Cranberry-separator. Grain-separator. Grain and seed separator. Middlings-separator. Ore-separator.							
Settee	C. E. Petterson	196,126	Oct. 16, 1877	470	137	12	643
Settee	A. Taylor	190,169	May 1, 1877	62	16	11	754
Sewage-tanks, Apparatus for emptying	E. Gettman	193,504	July 24, 1877	985	298	12	170
Sewage, Treating	F. Hille	191,853	June 12, 1877	335		11	1026
Sewer and other traps	W. F. Downey	197,838	Dec. 4, 1877	133	40	12	964
Sewer-cleaner	H. Allen	187,795	Feb. 27, 1877	897	279	11	350
Sewer-cleaner	C. Loscher	193,096	July 17, 1877	569	171	12	105
Sewer-gas from traps, Discharging	W. D. Stewart	195,853	Oct. 2, 1877	162	45	12	584
Sewer-gas trap	B. P. Bower	189,888	Apr. 24, 1877	918	280	11	702
Sewer-gases, Removing and destroying	S. & Corbett	198,277	Dec. 18, 1877	605	183	12	1049
Sewer, stench, and gas trap	B. P. Bower	194,070	Aug. 14, 1877	289	86	12	280
Sewer-trap	W. H. Collie and E. Deady	196,631	Oct. 30, 1877	996	290	12	737
Sewer-trap	J. Ganter	187,002	Feb. 6, 1877	86	29	11	213
Sewer-trap	G. W. Greenwood	186,832	Jan. 30, 1877	1036	320	11	182
Sewer-trap	S. C. H. Hansen	194,676	Aug. 28, 1877	910	271	12	389
Sewer-trap	A. H. Lovell	196,368	Oct. 23, 1877	725	209	12	687
Sewer-trap	J. H. Mackie	197,036	Nov. 13, 1877	319	94	12	814
Sewer-trap	J. B. Moore	193,266	July 17, 1877	737	225	12	128
Sewer-trap	H. A. Palmer	190,357	May 1, 1877	238	71	11	777
Sewer-trap	F. B. Wells	185,994	Jan. 2, 1877	180	56	11	32
Sewer-trap and flushing-gate	J. P. Schmitz	195,175	Sept. 11, 1877	437	130	12	469
Sewer-trap, Automatic	J. P. Schmitz	187,181	Feb. 6, 1877	246	81	11	236
Sewers, &c., Apparatus for constructing	M. G. Field	194,233	Aug. 14, 1877	463	140	12	303
Sewers, Receiver and stench-trap for street	T. Dark	197,255	Nov. 20, 1877	560	165	12	857
Sewing-machine	G. W. Baker	188,767	Mar. 27, 1877	814	249	11	514
Sewing-machine	F. H. Brown	193,477	July 24, 1877	956	301	12	167
Sewing-machine	W. G. Cummins	187,822	Feb. 27, 1877	925	287	11	353
Sewing-machine	W. G. Cummins	194,995	Sept. 11, 1877	249	75	12	442
Sewing-machine	W. A. Dawson	190,475	May 8, 1877	380	110, 111	11	804
Sewing-machine	J. R. V. De Castro	195,262	Sept. 18, 1877	540	157	12	491
Sewing-machine	W. Esty	187,837	Feb. 27, 1877	938	292	11	355
Sewing-machine	J. L. Follett	189,931	Apr. 24, 1877	957	293	11	708
Sewing-machine	J. E. A. Gibbs	196,116	Oct. 16, 1877	457	133, 134	12	641
Sewing-machine	W. L. Grout	195,502	Sept. 25, 1877	781	230	12	534
Sewing-machine	O. S. Hazard	188,514	Mar. 20, 1877	566	174	11	471
Sewing-machine	F. Jacob	190,047	Apr. 24, 1877	1086	330	11	724
Sewing-machine	J. T. Jones	197,141	Nov. 13, 1877	428	126	12	830
Sewing-machine	R. Jones	186,936	Feb. 6, 1877	25	10	11	205
Sewing-machine	J. Keats	191,975	June 12, 1877	456	141	11	1042
Sewing-machine	A. Leavitt and H. L. Drew	187,874	Feb. 27, 1877	972	302	11	360
Sewing-machine	T. A. Macaulay	195,939	Oct. 9, 1877	264	74	12	606
Sewing-machine	D. Porter	188,537	Mar. 20, 1877	585	181	11	474
Sewing-machine	G. M. Pratt	185,962	Jan. 2, 1877	151	46	11	28
Sewing-machine	L. Robinson	186,061	Jan. 9, 1877	253	76	11	50
Sewing-machine	E. H. Smith	187,564	Feb. 20, 1877	649	202	11	308
Sewing-machine	N. D. Stoops and C. C. Cushman	197,679	Nov. 27, 1877	999	299	12	931
Sewing-machine	G. H. Thiele	193,294	July 17, 1877	766	236	12	132

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Sewing-machine	W. F. Thomas	190,098	Apr. 24, 1877	1139	346, 347	11	731
Sewing-machine	J. Tripp	194,852	Sept. 4, 1877	95	30	12	414
Sowing-machine	C. B. True	186,441	Jan. 23, 1877	656	201	11	121
Sewing-machine attachment for piercing whip-covers	H. Lombard	193,453	July 24, 1877	936	284	12	163
Sewing machine, Bag, &c	K. C. Atwood	194,759	Sept. 4, 1877	1	1	12	401
Sewing-machine binder	J. Blasius	192,731	July 3, 1877	172	50	12	37
Sewing-machine bobbin-winder	A. C. Carey	186,709	Jan. 30, 1877	910	282	11	165
Sewing-machine bobbin-winder	W. Duchemin	196,202	Oct. 16, 1877	541	157	12	653
Sewing-machine bobbin-winder	W. L. Fish	187,000	Feb. 6, 1877	84	29	11	213
Sewing-machine bobbin-winder	T. McGrah	191,456	May 29, 1877	1373	414	11	959
Sewing-machine bobbin-winder	C. T. Powers	188,943	Mar. 27, 1877	997	306	11	539
Sewing machine, Book	H. R. Heyl and H. Brehmer	191,426	May 29, 1877	1335	405, 406	11	955
Sewing machine, Boot and shoe	C. Dancel	190,709	May 15, 1877	635	189	11	844
Sewing machine, Boot and shoe	S. Henshall	188,360	Mar. 13, 1877	401	125	11	440
Sewing machine, Boot and shoe	J. Keats	198,120	Dec. 11, 1877	416	129, 130	12	1015
Sewing machine, Boot and shoe	G. McKay	188,809	Mar. 27, 1877	873	265	11	521
Sewing-machine braider	G. H. W. Curtis	189,705	Apr. 17, 1877	708	218	11	667
Sewing machine, Button-hole	R. M. Melhuish	194,610	Aug. 28, 1877	850	253, 254	12	371
Sewing machine, Button-hole	F. E. Schmidt	197,528	Nov. 27, 1877	852	254	12	909
Sewing machine, Button-hole	M. E. Wallace	196,729	Oct. 30, 1877	1093	318	12	750
Sewing-machine button-hole attachment	C. M. Banks	187,082	Feb. 6, 1877	157	52	11	224
Sewing-machine button-hole attachment	A. Farrar	185,823	Jan. 2, 1877	9	4	11	10
Sewing-machine button-hole attachment	T. S. Huntington	190,329	May 1, 1877	211	63	11	774
Sewing-machine button-hole attachment	W. Randel	192,008	June 12, 1877	489	150	11	1046
Sewing machine, Carpet	J. Hesse	195,277	Sept. 18, 1877	553	161	12	494
Sewing-machine clutch	F. A. Barr	189,989	Apr. 24, 1877	1009	309	11	715
Sewing-machine crochet attachment	H. A. Blanchard	193,216	July 17, 1877	679	207	12	1.0
Sewing-machine cutting attachment	M. Stroop	187,064	Feb. 6, 1877	140	46	11	232
Sewing-machine darning attachment	R. M. Rose	198,687	Dec. 25, 1877	1008	306	12	1116
Sewing-machine drive-wheel and shaft-locking device.	G. W. Baker	195,436	Sept. 25, 1877	714	211	12	525
Sewing-machine dust-guard	A. A. Capeling	187,097	Feb. 6, 1877	174	57	11	226
Sewing-machine embroidering attachment	T. M. Rice	192,283	June 19, 1877	796	242	11	1098
Sewing-machine embroidering attachment	J. H. Rose and D. M. Somers	196,769	Nov. 6, 1877	30	9	12	765
Sewing-machine feed-dog	H. Feyh	189,716	Apr. 17, 1877	719	221	11	668
Sewing-machine feed mechanism	H. Feyh	187,113	Feb. 6, 1877	187	61, 62	11	228
Sewing-machine feed mchcanism	T. K. Keith	196,909	Nov. 6, 1877	181	52	12	785
Sewing-machine feeding mechanism	M. Christopherson	193,691	July 31, 1877	1197	358, 359	12	209
Sewing-machine feeding mechanism	T. K. Keith	195,932	Oct. 9, 1877	255	72	12	605
Sewing-machine for quilting	H. Oram	185,952	Jan. 2, 1877	142	43	11	27
Sewing-machine for quilting	F. L. Palmer	185,954	Jan. 2, 1877	143	44	11	27
Sewing-machine gathering and plaiting attachment	L. Onderdonk	192,183	June 19, 1877	686	210, 211	11	1084
Sewing-machine gathering device	G. H. Dimond	196,198	Oct. 16, 1877	539	156	12	652
Sewing machine, Glove	H. P. Henricksen	188,515	Mar. 20, 1877	566	174, 175	11	471
Sewing-machine hemmer	C. L. Goethals	187,003	Feb. 6, 1877	87	29	11	213
Sewing-machine hemmer	J. P. Ioor	193,873	Aug. 7, 1877	69	22	12	244
Sewing-machine housing	T. A. Wilson	190,658	May 8, 1877	566	168	11	828
Sewing-machine locking device and driving-wheel	G. W. Baker and D. Porter	194,067	Aug. 14, 1877	287	85	12	280
Sewing-machine motor	S. Artley, O. Berg, and H. Dieterica.	189,010	Apr. 3, 1877	2	1	11	559
Sewing-machine motor	A. D. Black	190,664	May 15, 1877	593	175	11	839
Sewing-machine motor	J. Haworth and W. H. Newell	189,624	Apr. 17, 1877	629	195	11	657
Sewing-machine needle	L. Loeske	188,648	Mar. 20, 1877	692	213	11	489
Sewing-machine needle	I. T. Smith	194,479	Aug. 21, 1877	724	216	12	344
Sewing-machine-needle clamp	J. V. Morton	191,362	May 29, 1877	1280	387	11	948
Sewing-machine-needle setter	L. S. Newcomb	196,247	Oct. 16, 1877	589	171	12	659
Sewing-machine needles, Machine for pointing	P. M. Beers	188,569	Mar. 20, 1877	612	190	11	479
Sewing-machine needles, Machine for straightening	R. Thompson and P. M. Beers	191,085	May 22, 1877	1009	300, 301	11	902
Sewing-machine-operating mechanism	V. Febore, F. Pouget, and G. Bonniot.	196,269	Oct. 16, 1877	549	159	12	654
Sewing-machine, Overseaming	J. S. Hall	187,006	Feb. 6, 1877	89	30	11	214
Sewing-machine, Overstitch	W. A. Palmateer	187,479	Feb. 20, 1877	575	178	11	298
Sewing-machine presser-foot	C. Turner	192,546	June 26, 1877	1081	326	11	1147
Sewing-machine quilting attachment	J. Donglass	187,830	Feb. 27, 1877	932	289	11	354
Sewing-machine, Revolving-hook	J. Tripp	194,853	Sept. 4, 1877	96	31	12	414
Sewing-machine, Revolving-hook	J. Tripp	198,257	Dec. 18, 1877	589	178	12	1046
Sewing-machine ruffler	B. Poulson	197,402	Nov. 20, 1877	706	211	12	880
Sewing-machine ruffling or plaiting attachment	N. Wilson	190,399	May 1, 1877	288	84	11	783
Sewing-machine, Shoe	J. Bond, jr	189,599	Apr. 17, 1877	665	187	11	654
Sewing-machine shuttle	D. W. Brown	186,536	Jan. 23, 1877	740	227	11	133
Sewing-machine shuttle	W. Brown	189,423	Apr. 10, 1877	417	131	11	621
Sewing-machine shuttle	D. A. Daly	190,289	May 1, 1877	175	52	11	768
Sewing-machine shuttle	T. J. Holton	196,018	Oct. 9, 1877	339	96	12	617
Sewing-machine shuttle	H. J. Nott	195,944	Oct. 9, 1877	267	75	12	606
Sewing-machine shuttle	C. A. Schumacher	198,693	Dec. 25, 1877	1013	308	12	1117
Sewing-machine shuttle	R. H. St. John	190,925	May 15, 1877	834	247	11	871
Sewing-machine shuttle	G. H. Thomas	191,268	May 29, 1877	1202	361	11	937
Sewing-machine shuttle-lever	R. H. St. John	191,193	May 22, 1877	1110	332	11	916
Sewing-machine stop mechanism	H. D. Baker	190,948	May 22, 1877	879	261	11	885
Sewing-machine stopping mechanism	C. H. Warner	192,886	July 10, 1877	354	104	12	68
Sewing machine, Straw	F. Blackburn and V. Moeslein	190,270	May 1, 1877	156	46	11	766
Sewing machine, Straw-braid	S. C. Brown	191,647	June 5, 1877	127	40	11	993
Sowing machine, Straw-braid	J. O'Neil	186,434	Jan. 23, 1877	645	197	11	120
Sewing machine, Straw-braid	A. J. Sedmibradsky	196,486	Oct. 23, 1877	840	242	12	703
Sewing-machine table	S. W. Wardwell, jr	198,170	Dec. 11, 1877	467	146	12	1022
Sewing-machine-table lamp-bracket	W. Vassie	185,878	Jan. 2, 1877	62	19	11	17

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Sewing-machine tables, Oil-can holder for	G. D. Clark	193,142	July 17, 1877	608	184	12	111
Sewing-machine take-up	A. Bocher	195,439	Sept. 25, 1877	716	212	12	525
Sewing-machine take-up device	J. L. Follett	189,446	Apr. 10, 1877	437	138	11	623
Sewing-machine take-up mechanism	J. F. Chamberlain	197,996	Dec. 11, 1877	297	91	12	997
Sewing-machine take-up mechanism	C. S. Cushman	197,107	Nov. 13, 1877	397	117	12	825
Sewing-machine take-up mechanism	J. L. Follett	196,210	Oct. 16, 1877	549	160	12	654
Sewing-machine thread-cutter	J. Doyle	187,365	Feb. 13, 1877	448	141	11	275
Sewing-machine trimmer	E. F. Bradford and V. R. Pierce	191,750	June 12, 1877	234	74	11	1013
Sewing-machine, Wax-thread	H. Folsom	198,594	Dec. 25, 1877	911	278	12	1103
Sewing-machine, Wax-thread	J. Keith	196,809	Nov. 6, 1877	72	22	12	771
Sewing-machine work-trimmer	H. H. Hallett	191,584	June 5, 1877	68	21	11	985
Sewing-machines, Clamp for button-hole	E. Morean	189,254	Apr. 3, 1877	222	74	11	588
Sewing-machines, Compound hand or balance wheel for.	W. Dawes	197,344	Nov. 20, 1877	651	192	12	871
Sewing-machines, Connecting the needle-operating levers to the needle-bars of.	N. D. Stoops	198,705	Dec. 25, 1877	1024	312	12	1118
Sewing-machines, Device for preventing back motion of.	G. M. Conover	191,316	May 29, 1877	1243	374	11	942
Sewing-machines, Needle-bar and trimming-knife for.	E. F. Dwyer	185,899	Jan. 2, 1877	86	26	11	19
Sewing-machines, Seam-stay guide for	E. Corbett and C. F. Harlow	192,568	July 3, 1877	12	4	12	14
Sewing-machines, Shuttle-driving mechanism for	S. M. Stewart	192,137	June 19, 1877	640	196	11	1078
Sewing-machines, &c., Stud and bearing for	L. T. Jones	187,640	Feb. 20, 1877	725	225	11	318
Shackle	H. W. Dilg	187,362	Feb. 13, 1877	446	140	11	274
Shackle, Convict's	J. L. Quackenbush	188,540	Mar. 20, 1877	588	182	11	475
Shade-fixture, Spring	P. W. Phillips	189,781	Apr. 17, 1877	787	242	11	677
Shade-holder	G. H. Reck	193,179	July 17, 1877	639	194	12	115
Shade-holder	B. B. Schneider	187,778	Feb. 27, 1877	881	274	11	347
Shade-holder and gas-burner	F. S. Shirley	189,799	Apr. 17, 1877	805	248	11	679
Shade-holder for kerosene fixtures	P. G. Clark and J. Kintz	186,799	Jan. 30, 1877	997	310	11	177
Shade-holder, Translucent	G. H. Chinnock	188,339	Mar. 13, 1877	381	119	11	438
Shade-roller	F. C. D. McKay	188,253	Mar. 13, 1877	296	93	11	426
Shade-roller	A. M. Smith	193,426	July 24, 1877	912	277	12	160
Shaft-axles, Anti-friction bearing for revolving	O. R. Chaplin	189,427	Apr. 10, 1877	421	132	11	621
Shaft-bearing	L. T. Jones	196,907	Nov. 6, 1877	178	52	12	785
Shaft, Carriage	J. A. J. Sawyer	189,657	Apr. 17, 1877	661	205	11	661
Shaft-coupling	J. H. Belser	186,527	Jan. 23, 1877	728	224	11	131
Shaft-coupling	G. A. Chapman	189,190	Apr. 3, 1877	157	54	11	580
Shaft-coupling, Universal	T. B. Rowell	187,486	Feb. 20, 1877	583	180	11	299
Shaft for driving machinery, Counter	C. W. Hunt	197,472	Nov. 27, 1877	791	236	12	901
Shaft-furnace for roasting ores	E. Green and A. Halsey	194,772	Sept. 4, 1877	15	4, 5	12	403
Shaft-furnace for smelting tailings and condensing mercury.	G. R. Evans and W. P. Prescott	198,283	Dec. 18, 1877	610	185	12	1049
Shaft-furnace for treating ores	M. D. Brett	188,098	Mar. 6, 1877	129	39	11	398
Shaft-hanger	O. Cooley	198,354	Dec. 18, 1877	671	204	12	1058
Shaft-hanger	P. Pryibil	197,171	Nov. 13, 1877	460	135	12	834
Shaft-hangers, Bearing for	G. A. H. Vollrath	196,505	Oct. 23, 1877	864	249	12	705
Shaft-holder, Vehicle	W. H. and J. A. Froman	196,888	Nov. 6, 1877	159	47	12	782
Shafts, Bearing and box for vertical	L. Webber	191,390	May 29, 1877	1302	395	11	951
Shafts, Keying wheels to	D. A. Woodbury	198,481	Dec. 25, 1877	811	246	12	1088
Shafting-box	J. B. Tomlinson	191,901	June 12, 1877	380	118	11	1031
Shafting, &c., Cylindrical coupling for	T. Dowling	198,508	Dec. 25, 1877	839	255	12	1091
Shafting, Device for drawing pulleys from	H. F. Casterline	186,229	Jan. 16, 1877	417	128	11	79
Shafting, Disengaging clutch-coupling for	N. Beauregard	196,516	Oct. 30, 1877	889	257	12	721
Shafting-hanger	J. M. Stone	185,840	Jan. 2, 1877	26	9	11	12
Shaving-mug	J. W. Smith	198,225	Dec. 18, 1877	543	168	12	1040
Shavings, Machine for grinding	I. and A. G. Tompkins	189,399	Apr. 10, 1877	396	126	11	618
Shawl-pin and button-hook combined	J. Barnes	188,276	Mar. 13, 1877	318	100	11	429
Shawl, package, or book strap handle	J. Cohen	195,345	Sept. 18, 1877	613	180	12	502
Shawl-strap	W. P. Fergneon	192,246	June 19, 1877	757	231	11	1093
Shawl-strap bar, Extensible	L. Lervine	187,289	Feb. 13, 1877	370	118	11	265
Shawl-strap handle	W. Kirk	187,716	Feb. 27, 1877	819	254	11	340
Shearing device, Animal	E. J. Weston	197,704	Nov. 27, 1877	1043	313	12	935
Shearing-machine	N. L. King	198,303	Dec. 18, 1877	625	190	12	1052
Shearing machine, Sheet-metal	G. H. Perkins	194,168	Aug. 14, 1877	404	121	12	295
Shearing machine, Sheet-metal	G. Summers	187,065	Feb. 6, 1877	141	47	11	222
Shears: *See* Barber's shears. Pruning-shears. Sheep-shears. Sheet-metal shears. Tinsmith's shears.							
Shears	D. A. Foltz and A. Miller	192,426	June 26, 1877	962	288	11	1132
Shears and scissors	A. D. Ikescamp	188,601	Mar. 20, 1877	643	199	11	481
Sheaves and pulleys, Bearing for	C. H. White	197,439	Nov. 20, 1877	744	222	12	885
Sheep, Device for holding	G. T. Wilson	194,318	Aug. 21, 1877	563	169	12	323
Sheep-shears	W. George	187,266	Feb. 13, 1877	347	110	11	261
Sheep-shears	W. H. Porterfield and H. C. Malin	186,366	Jan. 16, 1877	562	171	11	97
Sheep-shears	J. C. Wightman	194,794	Sept. 4, 1877	39	13	12	406
Sheep to be sheared, Apparatus for securing	W. M. G. Turquand	195,967	Oct. 9, 1877	290	81	12	610
Sheep-wash	W. Little	192,587	July 3, 1877	32		12	17
Sheet-iron, Apparatus for pickling	J. D. Grey	190,316	May 1, 1877	200	59	11	772
Sheet-iron, Process and composition for finishing	W. D. Wood	186,969	Feb. 6, 1877	54		11	209
Sheet-iron ware, Joint of vessels of enameled	F. G. and W. F. Niedringhaus	190,243	May 1, 1877	124	37	11	763
Sheet-metal	C. D. Leet and H. A. Chapin	188,155	Mar. 6, 1877	188		11	405
Sheet-metal can	G. W. Bell	193,108	July 17, 1877	581	175	12	107
Sheet-metal can	G. H. Chinnock	187,216	Feb. 13, 1877	299	97	11	255
Sheet-metal can	J. S. Field	186,084	Jan. 9, 1877	271	82	11	53
Sheet-metal can	J. S. Field	186,239	Jan. 16, 1877	425	130	11	80
Sheet-metal can	J. S. Field	187,260	Feb. 13, 1877	342	169	11	261
Sheet-metal can	F. C. Fleming	189,891	Apr. 24, 1877	922	281	11	703
Sheet-metal can	E. A. Leland	186,856	Jan. 30, 1877	1060	328	11	185
Sheet-metal can	E. A. Leland	198,305	Dec. 18, 1877	626	190	12	1052
Sheet-metal can	E. A. Leland	198,306	Dec. 18, 1877	627	190	12	1052
Sheet-metal can	H. Miller	192,446	June 26, 1877	981	295	11	1134

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Sheet-metal can	L. V. Sone	190,094	Apr. 24, 1877	1135	345	11	730
Sheet-metal can for preserving food	A. S. Lyman	195,620	Sept. 25, 1877	886	263	12	549
Sheet-metal can for preserving food	A. S. Lyman	195,621	Sept. 25, 1877	887	264	12	550
Sheet-metal-can machine	W. Green	196,351	Oct. 23, 1877	707	204	12	685
Sheet-metal-can machine	G. H. Perkins	191,172	May 22, 1877	1092	326	11	913
Sheet-metal-can machine	W. A. Wicks	197,440	Nov. 20, 1877	745	222	12	885
Sheet-metal cup and can	G. W. Knapp	197,865	Dec. 4, 1877	156	48	12	968
Sheet-metal elbow	N. I. Rothan	189,207	Apr. 3, 1877	234	78	11	590
Sheet-metal elbows, Manufacture of	F. Hoeltge	194,911	Sept. 4, 1877	151	47, 48	12	421
Sheet-metal-pan machine	T. R. Morgan	195,035	Sept. 11, 1877	290	88	12	447
Sheet-metal pipe-couplings, Machine for forming	E. Griffin	193,082	July 17, 1877	543	164	12	102
Sheet-metal pipe, Machine for grooving	F. M. Irons	192,071	June 19, 1877	579	175	11	1070
Sheet-metal, Shears for cutting	J. M. Barnett	188,332	Mar. 13, 1877	374	117	11	437
Sheet-metal-spinning machine	J. E. Wells	187,946	Feb. 27, 1877	1044	321	11	369
Sheet-metal tube, Spirally-wound	H. Noble	192,079	June 19, 1877	585	178	11	1071
Sheet-metal tubes, Machine for forming	A. C. Goodell	186,124	Jan. 9, 1877	310	94	11	58
Sheet-metal vessel	J. Gerard	197,624	Nov. 27, 1877	953	283	12	924
Sheet-metal vessel	J. C. Milligan and G. Booth	187,886	Feb. 27, 1877	986	305	11	361
Sheet-metal vessel for culinary purposes	H. C. Milligan	189,250	Apr. 3, 1877	219	73	11	588
Sheet-metal-vessel handle	F. G. and W. F. Niedringhaus	192,784	July 3, 1877	225	65	12	43
Shelf, Detachable	E. Sears	188,965	Mar. 27, 1877	1023	314	11	542
Shelf, Portable	G. A. Colby	185,820	Jan. 2, 1877	7	3	11	10
Shelf, Portable folding	A. C. French	198,454	Dec. 25, 1877	784	238	12	1084
Shelf-supporting device	F. G. Johnson	191,058	May 22, 1877	987	293	11	899
Shell	B. B. Hotchkiss	189,358	Apr. 10, 1877	354	114	11	613
Sheller: *See* Corn-sheller.							
Shelving and counter for stores	F. H. and W. H. Mayo	194,703	Aug. 28, 1877	936	278	12	383
Shingle-bolts, Machine for making and sapping	S. D. and G. W. Albright	193,746	July 31, 1877	1242	373	12	216
Shingle, Metal	E. Locher and C. Knispel	188,115	Apr. 3, 1877	91	33	11	571
Shingle, Metallic roofing	C. Comstock	194,766	Sept. 4, 1877	9	3	12	402
Shingle-sawing machine	B. C. Brown	190,703	May 15, 1877	630	187	11	843
Shingle-sawing machine	T. H. Delaney	191,034	May 22, 1877	965	286	11	896
Shingle-sawing machine	H. J. Morton	189,638	Aug. 17, 1877	640	198, 199	11	658
Shingle-sawing machine	W. J. Perkins	195,900	Oct. 9, 1877	218	62	12	600
Shingle-sawing machine	M. Prillaman	194,929	Sept. 4, 1877	173	54	12	424
Shingle-shaving machine	J. R. Kidder	186,138	Jan. 9, 1877	322	98	11	60
Shingling-bracket	I. W. Hammond	197,360	Nov. 20, 1877	665	198	12	873
Ship-building	A. Muhleisen	198,248	Dec. 18, 1877	581	176	12	1045
Ship's davits, Operating	A. B. Mullett and G. W. Baird	195,225	Sept. 18, 1877	500	147	12	486
Ship's lines from a model, Device for drafting	R. Duthie	193,755	July 31, 1877	1254	377	12	217
Ship's log	D. Carroll	197,995	Dec. 11, 1877	296	91	12	997
Ships, Port-hole protector for	W. H. Forbes	193,793	July 31, 1877	1297	389	12	223
Ship's rigging, Fair-leader for	J. Betts	198,447	Dec. 25, 1877	778	236	12	1083
Ship's ventilator and fog-alarm	W. F. Thiers	187,430	Feb. 13, 1877	510	158	11	283
Shipping-can	D. Croake	195,093	Sept. 11, 1877	352	106	12	457
Shipping-can	J. S. Dennis and L. F. Betts	195,706	Oct. 3, 1877	15	4	12	563
Shipping-can	J. C. Moore	195,942	Oct. 9, 1877	266	75	12	606
Shipping-can shield	E. T. Mason	195,380	Sept. 18, 1877	647	192	12	507
Shirred fabric	S. Wales	194,062	Aug. 14, 1877	282	84	12	279
Shirt	A. L. Edwards	195,992	Oct. 9, 1877	314	88	12	613
Shirt	O. H. Keep	188,640	Mar. 20, 1877	680	210	11	488
Shirt	G. P. Marvin	188,528	Mar. 20, 1877	579	179	11	473
Shirt	M. Simon	192,794	July 3, 1877	238	69	12	44
Shirt-bosom and collar protector	W. F. Brown	191,924	June 12, 1877	401	125	11	1034
Shirt-drying apparatus	J. McCartan	190,605	May 8, 1877	563	150	11	820
Shirt-pattern guide	H. Dyer	193,936	Aug. 7, 1877	137	42	12	253
Shirt-stud	C. H. Field	186,202	Jan. 16, 1877	395	121	11	76
Shoe	A. G. Colby	198,450	Dec. 25, 1877	781	237	12	1083
Shoe	T. Dowling	198,005	Dec. 11, 1877	306	94	12	999
Shoe	W. W. Fay	197,350	Nov. 20, 1877	656	194	12	872
Shoe	G. Francis	196,213	Oct. 16, 1877	554	160	12	655
Shoe	J. W. Hatch	195,447	Sept. 25, 1877	723	214	12	526
Shoe	A. H. Herring	190,433	May 8, 1877	337	99	11	798
Shoe	M. How	196,754	Nov. 6, 1877	18	5	12	763
Shoe	S. Johnson	197,517	Nov. 27, 1877	840	251	12	907
Shoe and shoe-fastener	G. R. Bickers	196,182	Oct. 16, 1877	522	151	12	650
Shoe, Bathing	C. C. Clayton	193,077	July 17, 1877	538	163	12	102
Shoe-bottoms, Machinery for forming and leveling	E. M. Dickinson	188,603	Mar. 20, 1877	644	199	11	483
Shoe-clasp	J. C. Hammond, jr., and T. E. King	191,758	June 12, 1877	240	76	11	1014
Shoe-exhibiting device	J. S. Palmer	196,037	Oct. 9, 1877	360	103	12	620
Shoe-fastener	W. J. Brown	187,505	Feb. 20, 1877	602	186	11	302
Shoe-fastener	C. L. Morehouse	197,392	Nov. 20, 1877	695	208	12	878
Shoe-fastener	V. Nivois	195,770	Oct. 2, 1877	75	23	12	572
Shoe-fastener	G. D. Paul	197,169	Nov. 13, 1877	458	135	12	834
Shoe-fastening	F. G. Farnham	191,414	May 29, 1877	1336	402	11	954
Shoe-fastening	F. G. Farnham	191,415	May 29, 1877	1327	403	11	954
Shoe-fastening	J. S. Hall	196,660	Oct. 30, 1877	1029	299	12	741
Shoe-fastening	C. F. Sylvester	198,165	Dec. 11, 1877	463	145	12	1022
Shoe-holder	H. Thompson	188,317	Mar. 13, 1877	361	113	11	435
Shoe-lace fastening	T. A. McDonald	198,134	Dec. 11, 1877	432	135	12	1017
Shoe-last fastener	S. Brumley	187,807	Feb. 27, 1877	910	282	11	351
Shoe machine, Wooden	D. P. Ramsdell	186,164	Jan. 9, 1877	345	105	11	63
Shoe-nail	H. S. Cushman and J. S. Brigham	190,670	May 15, 1877	597	177	11	839
Shoe-press bed	J. W. Rogers	194,265	Aug. 14, 1877	493	149	12	307
Shoe-soles, Sand-paper roller for buffing	J. B. Johnson	197,860	Dec. 4, 1877	152	46	12	967
Shoe-tip	S. Prior	187,775	Feb. 27, 1877	875	272	11	347
Shoe-tip, Metal	W. Van Wagenen	196,514	Oct. 23, 1877	873	251	12	707
Shoes, Making	G. McKay	190,153	May 1, 1877	42	12	11	152
Shoes, Manufacture of	J. Tibbetts	191,730	June 5, 1877	205	64	11	1004
Shoemaker's jack	J. Pyko	195,166	Sept. 11, 1877	426	126	12	468
Shoemaker's pounding-iron	F. Damlas	194,895	Sept. 4, 1877	134	42	12	419

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Shot, Apparatus for manufacture of drop	B. Tatham	198,057	Dec. 11, 1877	350	109	12	1006
Shot bag and charger	T. J. Jolly	190,765	May 15, 1877	690	204	11	851
Shot-machine	E. Shiver	194,271	Aug. 14, 1877	500	151	12	308
Shoulder-brace	A. Adamson	192,106	June 19, 1877	607	185	11	1074
Shoulder-brace	M. Altmann	198,503	Dec. 25, 1877	834	253	12	1090
Shovel: *See* Cultivator-shovel. Snow-shovel.							
Shovel	P. C. Kierns	187,020	Feb. 6, 1877	101	34	11	216
Shovel	J. T. Tyler	188,831	Mar. 27, 1877	891	271	11	524
Shovel and tongs	G. W. Whelan	189,978	Apr. 24, 1877	1002	306	11	713
Shovel-blanks, Manufacture of	A. Maltby	190,055	Apr. 24, 1877	1094	333	11	725
Shovel-sockets, Die for shaping	F. M. Clemons	192,232	June 19, 1877	741	226	11	1091
Show-box	B. Dreyfas	193,366	July 24, 1877	857	262	12	152
Show-cards, maps, &c., Mounting	W. J. Quarry	189,903	Apr. 24, 1877	932	284	11	704
Show-case	F. L. Bartlett and W. I. Bickford	192,855	July 10, 1877	326	96	12	64
Show-case	P. Henrichs	190,586	May 8, 1877	484	144	11	817
Show-case	J. Hey	193,334	July 24, 1877	825	253	12	148
Show-case	H. Houghton	186,567	Jan. 23, 1877	768	236	11	137
Show-case	W. T. Sherer	189,508	Apr. 10, 1877	494	156	11	631
Show-case	W. Shockley	192,717	July 3, 1877	162	46	12	35
Show-case	S. Stein	190,638	May 8, 1877	543	161	11	825
Show-case	T. Vaughan	188,832	Mar. 27, 1877	892	271	11	525
Show-cases, Removable top for	T. H. B. Parks	195,529	Sept. 25, 1877	803	238	12	538
Show-stand	J. R. Palmenberg	192,184	June 19, 1877	689	211	11	1084
Show-stand for exhibiting garments	J. N. Heinel	195,602	Sept. 25, 1877	871	259	12	547
Shower-bath	J. R. R. Morford	195,523	Sept. 25, 1877	799	236	12	537
Shower-bath apparatus	H. J. Bailey	192,723	July 3, 1877	169	49	12	36
Shutter	W. S. Everett	196,572	Oct. 30, 1877	945	273	12	729
Shutter	A. G. Haumann	192,506	June 26, 1877	1040	312	11	1141
Shutter	W. B. Turner	197,302	Nov. 20, 1877	602	179	12	864
Shutter and blind fastener	G. Marshman	194,255	Aug. 14, 1877	483	145	12	306
Shutter-bower	T. Thorn	198,166	Dec. 11, 1877	464	145	12	1022
Shutter bower and fastener	W. H. Fitz Gerald	190,479	May 8, 1877	385	112	11	804
Shutter bower and fastener	T. B. Rogers, jr	195,309	Sept. 18, 1877	583	170 171	12	498
Shutter-fastener	R. Hayden	194,774	Sept. 4, 1877	20	5	12	403
Shutter-fastener	G. W. Mudgett	195,525	Sept. 25, 1877	800	237	12	537
Shutter-fastener	E. Parker	196,696	Oct. 30, 1877	1062	308	12	745
Shutter-fastener	D. Ward	198,715	Dec. 25, 1877	1034	314	12	1120
Shutter fastener and bower, Combined	J. M. Crawford	197,611	Nov. 27, 1877	938	279	12	922
Shutter fastener and bower, Combined	R. M. Johnson	196,582	Oct. 30, 1877	953	276	12	730
Shutter-fastening	O. W. Booth and T. Wyatt	195,879	Oct. 9, 1877	195	56	12	597
Shutter-fastening	A. J. Cole	194,333	Aug. 21, 1877	578	173	12	325
Shutter-fastening	E. Mix	197,390	Nov. 20, 1877	694	208	12	878
Shutter, Revolving	H. Woodburne	196,614	Oct. 30, 1877	978	285	12	734
Shutter, Window	C. B. Hopkins and J. A. Johnston	188,908	Mar. 27, 1877	967	295	11	535
Shutter-worker	W. L. Buettler and J. C. Zweidinger.	191,105	May 22, 1877	1030	308	11	905
Shutter-worker	J. W. Delano and L. C. Morton	187,459	Feb. 20, 1877	556	172	11	296
Shutter-worker	W. P. McCobb	187,474	Feb. 20, 1877	571	177	11	298
Shutter-worker	W. P. McCobb	191,454	May 29, 1877	1371	414	11	959
Shutter-worker	W. C. McGill	186,861	Jan. 30, 1877	1067	329	11	185
Shutter-worker	S. W. Merry	196,470	Oct. 23, 1877	818	235	12	700
Shutter-worker	H. Smidt	198,470	Dec. 25, 1877	800	242	12	1086
Shutter-worker	H. Smith	193,047	July 10, 1877	504	151	12	89
Shutter-worker	M. M. Zeller	190,996	May 22, 1877	927	274	11	890
Shutter worker and fastener, Combined	J. Aborn	193,311	July 24, 1877	803	247	12	145
Shuttle-box mechanism	A. B. Capron	197,961	Dec. 11, 1877	264	81	12	992
Shuttle for weaving duck, &c	W. L. Gilbert	191,526	June 5, 1877	16	5	11	979
Shut le-motion	E. H. Graham	196,795	Nov. 6, 1877	57	17	12	769
Shuttle-spindle	E. M. Stevens	187,063	Feb. 6, 1877	139	46	11	222
Sickle-grinder	A. Cameron	195,700	Oct. 2, 1877	9	3	12	562
Sickle-grinder	W. S. Ingraham	188,639	Mar. 20, 1877	679	209	11	487
Sickle-grinder	W. S. Ingraham	198,114	Dec. 11, 1877	410	128	12	1014
Sickle-grinder	H. S. Stevens	189,279	Apr. 3, 1877	252	84	11	591
Sieve	G. W. Ketcham	196,584	Oct. 30, 1877	955	277	12	730
Sieve	W. F. Starnes and W. M. Lipe	188,265	Mar. 13, 1877	305	97	11	427
Sieve, Metallic	M. E. Dayton	194,033	Aug. 14, 1877	252	75	12	276
Sifter	N. W. Starr	187,427	Feb. 13, 1877	507	157	11	282
Sifter, Ash	T. H. Badger	187,801	Feb. 27, 1877	902	280	11	350
Sifter, Ash	J. R. Darke and D. S. Smith	191,754	June 12, 1877	237	75	11	1014
Sifter, Ash	I. and S. S. Davis	186,120	Jan. 9, 1877	305	93	11	58
Sifter, Ash	M. Dean and A. B. Kingsbury	193,230	July 17, 1877	698	213	12	122
Sifter, Ash	G. W. and L. Demond	191,520	June 5, 1877	10	3	11	978
Sifter, Ash	J. W. Litlefield	198,518	Dec. 25, 1877	846	278	12	1092
Sifter, Flour	C. F. Wickwire	186,778	Jan. 30, 1877	974	302	11	174
Sifter, Flour and meal	C. O. Peck	187,307	Feb. 13, 1877	393	124	11	367
Sifter, Molding-sand	J. Stackpole	189,583	Apr. 17, 1877	591	183	11	652
Sign	J. Perkins	197,288	Nov. 20, 1877	591	175	12	862
Sign	J. C. Wall	197,431	Nov. 20, 1877	736	220	12	884
Sign, Automatic smoking	J. and W. D. Davies	193,930	Aug. 7, 1877	130	40	12	252
Sign, Illuminating	C. H. Seawell	189,796	Apr. 17, 1877	803	247	11	679
Sign-letter, Metallic	C. Temme	190,695	May 15, 1877	621	184	11	842
Sign, Street	P. A. La France	193,006	July 10, 1877	461	139	12	83
Signal: *See* Fire and police alarm-signal. Light-house signal. Pneumatic signal. Railway-signal. Railway draw-bridge signal. Railway-switch signal. Train-signal.							
Signal-light, Floating	R. Pintsch	190,979	May 22, 1877	910	269 270	11	888
Signaling by means of reflected light, Apparatus for	H. C. Mance	186,427	Jan. 23, 1877	638	194 195	11	119

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Silk, &c., in hanks or skeins, Machine for dressing	C. Corron	189,195	Apr. 3, 1877	100	56	11	580
Silver, &c., from lead, Process and apparatus for separating.	A. K. Eaton	196,204	Oct. 16, 1877	544	158	12	653
Silver-ores, Reducing	C. C. Stetefeldt	196,202	Oct. 16, 1877	607		12	661
Single-tree	T. G. Bass	198,265	Dec. 18, 1877	596	160	12	1047
Sink	G. Jennings	191,970	June 12, 1877	452	140	11	1041
Sink	B. Wallace	188,995	Mar. 27, 1877	1047	322	11	546
Sink and sewer trap	J. H. Mackie	188,652	Mar. 20, 1877	695	214	11	490
Sink, Garbage	T. X. Walsh	190,649	May 8, 1877	556	166	11	827
Sink-gas trap	J. A. Thompson	197,952	Dec. 11, 1877	251	78	12	991
Sink guard and cover	A. S. Hodges	187,276	Feb. 13, 1877	357	113	11	263
Sink, Kitchen	J. M. Carson	185,819	Jan. 2, 1877	6	3	11	9
Sink-trap	J. Magee	192,078	June 19, 1877	585	178	11	1071
Sink-trap	H. Miller	196,033	Oct. 9, 1877	357	101	12	619
Sirup and mineral-water, &c	H. L. Bowker	193,476	July 24, 1877	955		12	167
Sirups, Manufacture of	B. S. Toothill	198,474	Dec. 25, 1877	804		12	1087
Sizing composition	N. Crabtree	187,218	Feb. 13, 1877	301	...	11	255
Skate	J. Adair	187,697	Feb. 27, 1877	798	248	11	337
Skate	J. P. Becker, jr.	197,007	Nov. 13, 1877	287	85	12	809
Skate	J. P. Becker, jr.	197,008	Nov. 13, 1877	288	85	12	809
Skate	J. A. Dodge	191,573	June 5, 1877	59	18	11	984
Skate	O. Edwards	192,643	July 3, 1877	93	27	12	25
Skate-fastening	E. H. Barney	187,584	Feb. 20, 1877	668	208	11	311
Skate-holder	E. C. Henderson	195,817	Oct. 2, 1877	124	86	12	579
Skate, Parlor	L. H. Gano	188,351	Mar. 13, 1877	391	122	11	439
Skate, Parlor	J. W. Post	189,783	Apr. 17, 1877	789	242, 243	11	677
Skate, Parlor	H. L. True	189,285	Apr. 3, 1877	257	85	11	592
Skate, Roller	R. Gibson	189,451	Apr. 10, 1877	443	139	11	624
Skate, Roller	R. Hutton	196,230	Oct. 16, 1877	573	166	12	657
Skate, Roller	W. A. Leggo and F. C. Ireland	191,350	May 29, 1877	1270	383, 384	11	946
Skate, Roller	H. Lumbye	197,385	Nov. 20, 1877	688	206	12	877
Skate, Roller	J. Miner	191,542	June 5, 1877	35	10	11	981
Skating-rink	E. Burgin	187,598	Feb. 20, 1877	682	212	11	313
Skating surface, Roller	G. M. Rollins	198,045	Dec. 11, 1877	340	105	12	10 4
Skelping-die	H. C. Evans	186,551	Jan. 23, 1877	755	231	11	135
Skewer-puller	F. A. Will and J. Finck	196,612	Oct. 30, 1877	977	284	12	734
Skid	W. S. Babcock	190,404	May 8, 1877	309	91	11	795
Skid for handling boxes	A. Day	189,706	Apr. 17, 1877	709	219	11	667
Skins, Machine for scouring and dressing sheep and goat.	C. T. and S. A. Ford	196,793	Nov. 6, 1877	53	17	12	768
Skins, Treating	J. Kent	196,672	Oct. 30, 1877	1038		12	742
Skirt	J. Mark	189,119	Apr. 3, 1877	94	34	11	572
Skirt and hose suspenders	L. Z. Hitchcock	198,617	Dec. 25, 1877	939	287	12	1106
Skirt and stocking supporter clasp	E. C. Fales	189,442	Apr. 10, 1877	434	137	11	623
Skirt-supporter	C. V. Richards	188,675	Mar. 20, 1877	717	220	11	493
Skirt-supporter	W. W. Towson	189,154	Apr. 3, 1877	124	44	11	576
Skirts, Manufacture of ornamented felt	P. A. Dailey	198,356	Dec. 18, 1877	673	206	12	1058
Skiving-machine	W. S. Fitzgerald	192,645	July 3, 1877	96	28	12	25
Skiving-machine	E. J. Foss	191,418	May 29, 1877	1329	403	11	954
Skylight	F. M. Campbell	196,784	Nov. 6, 1877	47	14	12	767
Skylight	O. Davis	187,108	Feb. 6, 1877	183	60	11	227
Skylight	J. Henry	190,856	May 15, 1877	767	228	11	862
Skylight	S. M. Howard	191,802	June 12, 1877	285	89	11	1019
Skylight	E. C. Specht and J. Spieler	188,689	Mar. 20, 1877	731	221	11	494
Skylight-bar	J. W. Atkinson	191,636	June 5, 1877	116	36	11	992
Skylight-bar	J. Henry	188,904	Mar. 27, 1877	961	294	11	534
Skylight lifter and lock	J. F. Wollensak	191,088	May 22, 1877	1012	302	11	903
Skylight, Self-ventilating	P. F. Kirk	198,462	Dec. 25, 1877	791	240	12	1085
Skylight, Ventilating	J. Harsch	195,362	Sept. 18, 1877	627	186	12	504
Slag or scoria, Apparatus for treating furnace	C. Wood	188,763	Mar. 27, 1877	812	249	11	514
Slag-pot	H. Zotzman	187,212	Feb. 6, 1877	273	89	11	239
Slasher	J. M. Briggs, J. F. Greene, and J. Radikin.	189,838	Apr. 24, 1877	867	264	11	696
Slate	C. N. Brombacher	189,996	Apr. 24, 1877	1015	311	11	716
Slate	J. W. Hyatt	187,145	Feb. 6, 1877	215	70	11	232
Slate	J. W. Hyatt	187,146	Feb. 6, 1877	216	70	11	232
Slate	F. W. Mallett	189,118	Apr. 3, 1877	94	34	11	571
Slate	C. F. Rapp	186,621	Jan. 23, 1877	822	254	11	144
Slate	C. C. Shepherd	198,552	Dec. 25, 1877	875	267	12	1097
Slate	G. S. Velez	188,083	Mar. 6, 1877	118	35	11	596
Slate and book carrier, Combined	J. Haggerty	190,318	May 1, 1877	201	60	11	772
Slate and scholar's companion, Combined	W. D. McCormick	188,651	Mar. 20, 1877	695	213	11	489
Slate-cleaner	E. M. Swift	190,644	May 8, 1877	550	163	11	826
Slate, Drawing	C. C. Shepherd	193,099	July 17, 1877	573	173	12	105
Slate-frame	H. C. Goodrich	188,792	Mar. 27, 1877	852	258	11	5 9
Slate-frame attachment	F. S. Allen	194,883	Sept. 4, 1877	125	38	12	418
Slate-frame attachment	M. Hills	193,117	July 17, 1877	588	177	12	108
Slate-frame attachment	K. F. Meyer	191,009	May 22, 1877	942	278	11	892
Slate, Hinged	R. S. Barnum	188,849	Mar. 27, 1877	901	274	11	536
Slate, School	C. C. Shepherd	193,464	July 24, 1877	946	287	12	165
Slate-washer	R. De Haven	189,033	Apr. 3, 1877	22	7	11	562
Sled	T. J. Cope	197,337	Nov. 20, 1877	644	190	12	870
Sled	C. D. Hinman and M. and W. W. Ladd.	194,600	Aug. 28, 1877	842	251	12	370
Sled, Coasting	H. S. Miller	197,524	Nov. 27, 1877	870	253	12	909
Sled, Coasting	C. R. Van Hoesen	191,496	May 29, 1877	1426	430	11	964
Sled coupling, Bob	T. Bruner	187,213	Feb. 13, 1877	297	97	11	255
Sled, Bob	J. Littfin	190,880	May 15, 1877	790	234	11	865
Sled, Boy's	S. Gilzinger	188,353	Mar. 13, 1877	392	123	11	439
Sled, Boy's	H. F. Morton	193,380	July 24, 1877	867	266	12	154
Sled-brake	E. M. Lawrence	191,867	June 12, 1877	349	108	11	1027

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Sled-brake	C. Lemley	194,498	Aug. 21, 1877	742	221	12	347
Sled-brake	H. W. Smith	197,676	Nov. 27, 1877	997	298	12	930
Sled-propeller	G. F. Shaver	192,461	June 26, 1877	992	299	11	1136
Sled-propeller	D. Williams	198,063	Dec. 11, 1877	357	111	12	1007
Sled-runners, Machine for forming	S. Gilzinger	195,813	Oct. 2, 1877	119	35	12	578
Sled, Stone and log	W. Gregg	195,359	Sept. 18, 1877	624	185	12	504
Sleeve and cuff retainer	M. M. Walk	195,678	Sept. 25, 1877	943	282	12	557
Sleigh	N. Corson	197,103	Nov. 13, 1877	393	116	12	824
Sleigh	G. H. Laub	192,518	June 26, 1877	1055	317	11	1143
Sleigh	G. Schaffuer	192,133	June 19, 1877	637	195	11	1077
Sleigh and shoe	D. J. Hendrickson	187,273	Feb. 13, 1877	254	113	11	262
Sleigh-bells, Stringing	S. A. Chapman	197,329	Nov. 20, 1877	637	188	12	868
Sleigh-knee	A. A. Abbott	189,675	Apr. 17, 1877	679	210	11	663
Sleigh-knees, Attaching braces to	G. M. Proctor	186,017	Jan. 9, 1877	209	63	11	45
Sleigh-knees, Metallic	P. Filman	198,591	Dec. 25, 1877	909	278	12	1103
Sleigh-runner	C. Smith	191,481	May 29, 1877	1401	422	11	962
Sleigh-runner for wheeled vehicles	M. C. Wright	194,208	Aug. 14, 1877	437	133	12	300
Sleigh-runner, Wagon	T. Grissinger	188,621	Mar. 20, 1877	659	204	11	485
Sleigh-shoe	B. F. Sweet	192,394	June 26, 1877	938	281	11	1128
Slop-hopper	M. M. Harvey	187,624	Feb. 20, 1877	711	220	11	316
Sludge and sludge-oil, Treating	W. P. Jenney	190,762	May 15, 1877	686		11	851
Smelting-furnace	J. L. Sturdy and J. A. May	192,469	June 26, 1877	1000	301	11	1137
Smelting furnace, Zinc	O. Lumaghi	196,369	Oct. 23, 1877	726	209	12	687
Smoke and gas consuming furnace	K. M. Jarvis	186,734	Jan. 30, 1877	931	289	11	168
Smoke-consuming furnace	H. Young, jr.	188,719	Mar. 20, 1877	759	233	11	498
Smoke-house	H. T. C. Kraus	192,377	June 26, 1877	918	276	11	1126
Smoke-ventilator	C. K. Edwards	196,790	Nov. 6, 1877	51	16	12	768
Smoking-pipe	B. A. Jonasson	189,105	Apr. 3, 1877	83	29	11	570
Smoking-pipe	E. S. May	192,123	June 19, 1877	628	191	11	1076
Smoking-pipes, Device for cleaning	S. K. Luce	191,869	June 12, 1877	350	108	11	1027
Smoking-tube	W. Brisbane	198,341	Dec. 18, 1877	658	200	12	1056
Smoothing-iron chill	J. F. Bless	191,221	May 29, 1877	1160	348	11	931
Snap-hook	E. P. Brennan	188,578	Mar. 20, 1877	623	192	11	480
Snap-hook	L. M. Doddridge	195,808	Oct. 2, 1877	113	33	12	577
Snap-hook	J. Hall	191,423	May 29, 1877	1333	404	11	955
Snap-hook	W. Heath	193,950	Aug. 7, 1877	149	46	12	255
Snap-hook	G. D. Mosher	196,989	Nov. 13, 1877	272	80	12	806
Snap-hook	W. Nash and E. Kempshall	189,129	Apr. 3, 1877	101	36	11	573
Snap-hook	C. Robinson and J. F. Ellis	191,472	May 29, 1877	1388	419	11	961
Snap-hook	E. J. Steele	185,980	Jan. 2, 1877	165	51	11	30
Snap-hook	A. B. Tanner	186,637	Jan. 23, 1877	835	258	11	146
Snap-hook and buckle, Combined	J. H. Cleveland and E. McConnell	195,260	Sept. 18, 1877	538	157	12	491
Snap-hook and buckle, Combined	F. J. Deisz	191,842	June 12, 1877	327	101	11	1025
Snap-hook and buckle, Combined	J. R. Hopper	191,857	June 12, 1877	341	105	11	1026
Snapper-sounder or toy	J. S. Rowbotham	186,169	Jan. 9, 1877	352	107	11	64
Snow, Machine for removing and melting	H. Sinclair	197,905	Dec. 4, 1877	198	60	12	974
Snow-plow	R. G. Little	186,740	Jan. 30, 1877	937	291	11	169
Snow-plow	J. D. Mann	188,158	Mar. 6, 1877	191	58	11	406
Snow-plow	G. Royal	193,384	July 24, 1877	871	267	12	154
Snow-plow	G. Royal	198,468	Dec. 25, 1877	798	242	12	1086
Snow-shovel	J. F. Palmer	195,158	Sept. 11, 1877	418	124	12	466
Snow-shovel	C. H. Victory	192,853	July 10, 1877	324	95	12	64
Soap and shaving box, Combined	A. Hopfen	192,997	July 10, 1877	453	137	12	83
Soap-boiler	J. M. Jackman	190,866	May 15, 1877	778	230	11	863
Soap composition	J. W. Bartlett	187,245	Feb. 13, 1877	329		11	259
Soap composition	C. H. Baxter and H. Horrocks	189,175	Apr. 3, 1877	139		11	578
Soap composition	W. V. Wallace	196,402	Oct. 23, 1877	757	218	12	692
Soap-cutting machine	N. A. Chandler and J. C. Boesch	193,223	July 17, 1877	690	211	12	122
Soap, Floating	A. Quentin	196,766	Nov. 6, 1877	28	8	12	765
Soap-making composition	C. B. Elliott and H. C. Alexander	195,267	Sept. 18, 1877	546		12	492
Soap, Medicated	R. E. Whittemore	194,021	Aug. 7, 1877	225		12	264
Sock and stocking	J. L. Kranser	186,398	Jan. 16, 1877	600	184	11	104
Sod-cutter	J. Genzly	188,352	Mar. 13, 1877	391	123	11	439
Soda-carbonating apparatus	J. McCloskey	186,743	Jan. 30, 1877	939	291	11	170
Soda drum, Head for caustic	J. Simpson	188,197	Mar. 6, 1877	235	73	11	411
Soda from its sulphate, Manufacture of	F. Gutzkow	198,293	Dec. 18, 1877	619		12	1050
Soda, Manufacture of granulated crystalline carbonate of.	J. Mactear	195,142	Sept. 11, 1877	399		11	464
Soda-water apparatus	F. W. Wiesebrock	190,395	May 1, 1877	283	83	11	783
Soda-water apparatus	O. Zwietusch	187,446	Feb. 13, 1877	531	164	11	285
Soil breaker and irrigator	E. Robbins	197,055	Nov. 13, 1877	338	100	12	817
Soil-pulverizer	J. Adams	196,617	Oct. 30, 1877	982	286	12	735
Solar camera	D. A. Woodward	195,428	Sept. 18, 1877	694	205	12	514
Soldering and heating furnace	J. Burgess	192,360	June 26, 1877	901	270	11	1124
Soldering apparatus	A. S. Lyman	195,622	Sept. 25, 1877	888	264	12	550
Soldering eave-troughs, Holder for	J. Huth	192,435	June 26, 1877	970	291	11	1133
Soldering-iron	H. Stevens	196,130	Oct. 16, 1877	474	138	12	643
Soldering-iron	T. J. Walsh	195,061	Sept. 11, 1877	318	96	12	451
Soldering-iron heating-furnace	P. Cook and J. G. Jones	188,858	Mar. 27, 1877	918	279	11	528
Soldering-iron, Gas-heater for	G. R. Gleason	189,724	Apr. 17, 1877	726	223	11	669
Soldering-irons, &c., Heating device for	J. S. Hull	186,677	Jan. 30, 1877	880	272	11	161
Soldering-machine	W. D. Brooks and R. Gornall	192,813	July 10, 1877	285	83	12	59
Soldering-machine	P. Dillon and J. Cleary	186,813	Jan. 30, 1877	1009	313	11	179
Soldering-machine	H. Miller	190,888	May 15, 1877	797	236	11	866
Soldering-machine	S. Uhlich	191,202	May 22, 1877	1120	335	11	918
Soldering process	G. M. Clark and A. Harris	191,405	May 29, 1877	1318	400	11	953
Soldering-tool	L. Cutting	192,743	July 3, 1877	183	53	12	38
Soldering-tool	A. Harris	194,519	Aug. 28, 1877	774	230	12	360
Sole-channeling machine	L. Goddu	198,103	Dec. 11, 1877	394	124	12	1012
Sole-edge-bending machine	S. Henshall	193,447	July 24, 1877	931	283	12	163
Sole, Galvanic	E. H. Craw	187,105	Feb. 6, 1877	181	59	11	227
Sorghum-mill	E. A. Withers	192,475	June 26, 1877	1103	302	11	1137
Sounding-machine	F. E. Schrom	197,800	Dec. 4, 1877	95	29	12	959

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Sower and cultivator, Seed	E. Emmert	190,839	May 15, 1877	751	222, 223	11	860
Sower, Broadcast	D. Buist and C. E. Alden	186,410	Jan. 23, 1877	623	190	11	117
Sower, Broadcast	L. Celler	190,284	May 1, 1877	170	50, 51	11	768
Sower, Seed	J. Pearce	186,214	Jan. 16, 1877	405	124	11	78
Sower, Seed and plaster	J. W. Gamble	192,328	June 26, 1877	869	262	11	1119
Spark-arrester	J. A. Blair and W. C. Bush	195,745	Oct. 2, 1877	56	17	12	569
Spark-arrester	R. Brayton, D. June, and O. S. French.	190,275	May 1, 1877	162	47	11	767
Spark-arrester	H. S. Bryan	193,343	Dec. 18, 1877	660	201	12	1057
Spark-arrester	H. Colford	195,346	Sept. 18, 1877	613	181	12	502
Spark-arrester	J. Gates	192,063	June 19, 1877	570	173	11	1069
Spark-arrester	P. H. Grace	193,242	July 17, 1877	711	218	12	124
Spark-arrester	W. S. Hudson	186,345	Jan. 16, 1877	542	164	11	94
Spark-arrester	E. M. Johnson	189,228	Apr. 3, 1877	193	66	11	584
Spark-arrester	C. Mattoni, jr	197,281	Nov. 20, 1877	584	173	12	861
Spark-arrester	W. Rushton	192,841	July 10, 1877	312	91	12	63
Spark-arrester	T. Shaw	194,732	Aug. 28, 1877	964	286	12	387
Spark-arrester	I. B. Smith	191,187	May 22, 1877	1105	330	11	915
Spark-arrester	F. M. Stevens	194,382	Aug. 21, 1877	621	187	12	331
Spark-arrester	W. T. Urie	190,100	Apr. 24, 1877	1141	347	11	731
Spark arrester and consumer	T. E. Roberts	186,367	Jan. 16, 1877	562	171	11	97
Spark arrester and conveyer	J. A. Pao	193,990	Aug. 7, 1877	191	57, 58	12	260
Spark-arrester, Locomotive	J. Hewitt	198,110	Dec. 11, 1877	406	127	12	1014
Spark-arrester, Steam-boiler	T. W. Godwin	198,602	Dec. 25, 1877	921	281	12	1104
Spark-conveyer	W. G. Galo	187,001	Feb. 6, 1877	85	29	11	213
Spark-extinguisher	J. J. Gilbert	188,887	Mar. 27, 1877	946	288	11	532
Spark-extinguisher	C. H. Prüsmann	187,047	Feb. 6, 1877	127	41	11	219
Spectacle-frame	W. H. Peckham	192,125	June 19, 1877	630	192	11	1076
Spectacle-frame	T. A. Willson	193,739	July 31, 1877	1237	371	12	215
Spectacle-indicator	A. and B. Kent	193,660	July 31, 1877	1170	350	12	205
Spectacle temples and joints, Manufacture of	D. C. Winans	190,659	May 8, 1877	567	168	11	828
Spectacles	I. S. Doten	190,133	May 1, 1877	20	5	11	749
Spectacles	L. Franklin	194,345	Aug. 21, 1877	591	177	12	327
Spectacles	J. Johnson	188,246	Mar. 13, 1877	292	91	11	425
Spectacles	C. Yocco	190,530	May 8, 1877	481	136	11	811
Speculum	E. B. Harding	187,625	Feb. 20, 1877	711	221	11	317
Speculum	A. Shiland	196,600	Oct. 30, 1877	970	281	12	733
Speed and current indicator	D. Iffland	190,045	Apr. 24, 1877	1080	328, 329	11	723
Speed and distance indicator	G. M. Jessen	187,639	Feb. 20, 1877	724	224	11	318
Speed and distance recorder and indicator combined	F. M. Dunlap and R. Magill	196,643	Oct. 30, 1877	1012	294	12	739
Speed-indicator	W. Heckert	188,738	Mar. 27, 1877	788	242	11	511
Speed-indicator for shafting	W. Churchill	194,548	Aug. 28, 1877	799	238	12	364
Speed-measure, Rotary	W. Ireland	193,707	July 31, 1877	1209	363	12	211
Speed-recorders, Reciprocating pencil-carrier for	W. W. Wythe	198,232	Dec. 18, 1877	552	170	12	1041
Spice-box	O. M. Brock	188,040	Mar. 6, 1877	86	25	11	392
Spice-box	H. J. White	188,709	Mar. 20, 1877	749	230	11	497
Spice box and grinder, Combined	O. Seifert and J. W. Manger	197,982	Dec. 11, 1877	283	86	12	995
Spice-caddy	E. Norton	197,164	Nov. 13, 1877	452	133	12	834
Spike-extractor	J. C. Chapman	197,997	Dec. 11, 1877	298	91	12	997
Spike-extractor	J. A. Powell	188,407	Mar. 13, 1877	451	140	11	447
Spike-pointing machine	L. Do Lario	195,208	Sept. 18, 1877	481	142	12	484
Spike-puller	J. Douglass	186,546	Jan. 23, 1877	750	230	11	134
Spike-puller	M. S. Prentice	186,874	Jan. 30, 1877	1079	334	11	187
Spindle: *See* Loom-shuttle spindle. Shuttle-spindle. Mill-spindle.							
Spindle	G. P. Whitman	192,473	June 26, 1877	1002	302	11	1137
Spindle and bobbin	G. Draper	192,493	June 26, 1877	1025	309	11	1140
Spindle and its bearings	J. White	197,579	Nov. 27, 1877	904	269	12	916
Spindle-driving bands, Tension-regulator for	G. Draper	186,326	Jan. 16, 1877	521	158	11	92
Spinning and twisting frames, Stop-motion for	W. F. Hastings	187,010	Feb. 6, 1877	93	32	11	215
Spinning, doubling, and twisting machine	H. A. Chapin	193,796	Jan. 30, 1877	994	309	11	177
Spinning-frame	G. Draper	186,325	Jan. 16, 1877	517	157, 158	11	91
Spinning-frame	W. F. Draper	189,890	Apr. 24, 1877	920	280	11	703
Spinning-frame bobbin-support	G. Estes	194,298	Aug. 21, 1877	540	163	12	320
Spinning frame, Ring	G. Draper	186,324	Jan. 16, 1877	512	156, 157	11	91
Spinning frame, Ring	G. Draper	195,887	Oct. 9, 1877	204	58	12	598
Spinning frame, Ring	W. F. Draper	186,322	Jan. 16, 1877	501	153, 154	11	91
Spinning frame, Ring	W. F. Draper	190,710	May 15, 1877	638	189, 190	11	844
Spinning frame, Ring	W. E. Nichols	195,154	Sept. 11, 1877	413	123	12	466
Spinning-frames, Clearer-roll support for	F. B. Hart	191,585	June 5, 1877	69	21	11	986
Spinning-machine	G. Draper	186,323	Jan. 16, 1877	507	154, 155	11	91
Spinning-machine	G. E. Taft	190,525	May 8, 1877	426	125	11	810
Spinning-machine bolster and step	W. S. Luscomb	186,486	Jan. 23, 1877	693	213	11	126
Spinning-machine cop-building mechanism	A. P. Adams	195,470	Sept. 25, 1877	748	221	12	530
Spinning-machine spindle bolster and step	J. T. Beall	195,079	Sept. 11, 1877	337	102	12	454
Spinning-machine spindle bolster and step	G. Richardson	197,565	Nov. 27, 1877	889	265	12	914
Spinning-machine top-roll support	F. Hardenbergh and H. L. Holmes	190,756	May 15, 1877	681	202	11	850
Spinning-machines, Traverse motion for guide-wires of.	J. Garrett	188,121	Mar. 6, 1877	151	46	11	401
Spinning machinery, Combined register and stop motion for.	B. Saunders	192,391	June 26, 1877	933	280	11	1128
Spinning machinery, Cop-building mechanism for	J. M. Stone	195,906	Oct. 9, 1877	225	64	12	601
Spinning machinery, Stop-motion for railway-heads in.	E. A. Mongeon	194,710	Aug. 28, 1877	941	280	12	384
Spinning machinery, Top-roll for	S. E. Whittemore and W. A. Green.	192,315	June 19, 1877	839	254	11	1103

Alphabetical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Spinning-mule	S. George	192,064	June 19, 1877	572	173	11	1069
Spinning mule	P. McGovern	193,887	Aug. 7, 1877	86	28	12	246
Spinning-mule	H. M. Schon	194,269	Aug. 14, 1877	497	150, 151	12	307
Spinning mule and jack	J. Martin	193,884	Aug. 7, 1877	77	25	12	216
Spinning-quill	J. C. Stanley	188,825	Mar. 27, 1877	887	269	11	524
Spinning, Ring	J. Goulding	188,736	Mar. 27, 1877	786	241	11	510
Spinning-ring holder	W. F. Draper	192,490	June 26, 1877	1022	309	11	1139
Spinning-ring holder	J. W. Wattles	188,084	Mar. 6, 1877	119	35	11	396
Spinning-tool slide-rest	M. C. Chambers	187,098	Feb. 6, 1877	175	57	11	226
Spinning-wheel, Domestic	J. A. and E. S. Smith	193,562	July 24, 1877	1047	313, 314	12	177
Spiral spring	J. Ludlum	194,157	Aug. 14, 1877	396	118	12	293
Spiral springs, Machine for making	B. H. Lockwood	195,619	Sept. 25, 1877	885	263	12	549
Spirits, Apparatus for rectifying	J. Kast	195,376	Sept. 18, 1877	641	190	12	507
Spirits, Apparatus for the redistillation of	P. G. Rooney	189,578	Apr. 17, 1877	586	181	11	651
Spittoon	G. Mittinger	197,525	Nov. 27, 1877	850	253	12	969
Spittoon	P. C. Ste. Marie	190,924	May 15, 1877	833	247	11	871
Spittoon	L. H. Wooden	187,444	Feb. 13, 1877	529	163	11	285
Splint, Hinged	G. S. Adams	186,700	Jan. 30, 1877	902	279	11	164
Splints, Manufacturing felted surgeon's	D. Ahl	194,800	Sept. 4, 1877	45	14, 15	12	407
Spoke-finishing machines, Shoulder-plate for	W. McNeal	197,646	Nov. 13, 1877	329	97	12	815
Spoke-polishing machine	O. Allen	195,555	Sept. 25, 1877	825	244, 245	12	541
Spoke-socket	G. F. Graves	196,891	Nov. 6, 1877	161	48	12	783
Spoke-socket	J. P. Parkhurst	192,596	July 3, 1877	40	12	12	18
Spoke-tenoning and felly-boring machine	E. Goss	194,300	Aug. 21, 1877	542	163	12	320
Spokes, Oscillating cutter-head for finishing	J. R. Locke	189,635	Apr. 17, 1877	637	197	11	658
Sponge-cup	M. M. Macdonald	196,983	Nov. 13, 1877	265	78	12	806
Sponge-cup	C. Prentis, 2d	188,185	Mar. 6, 1877	221	69	11	409
Spool-case	B. R. Hamilton	192,914	July 10, 1877	378	112	12	72
Spool-case	N. Waterbury	192,038	June 12, 1877	524	161	11	1050
Spool-holder	F. W. Claybrook	195,343	Sept. 18, 1877	612	180	12	502
Spool-holder	T. B. Inness	187,533	Feb. 20, 1877	624	194	11	305
Spool-holder and collar-box, Combined	J. Flynn and C. A. Brown	195,597	Sept. 25, 1877	868	258	12	547
Spool-holder and pin-cushion, Combined	J. M. Montgomery, jr.	192,523	June 26, 1877	1060	319	11	1144
Spool show-box	R. Trautmann	190,099	Apr. 24, 1877	1140	347	11	731
Spool-stand	W. S. Hotchkiss	190,491	May 8, 1877	395	115	11	806
Spool, Thread	J. McMilan	185,864	Jan. 2, 1877	49	15	11	15
Spool-winding machine	J. T. Wibberley	187,408	Feb. 20, 1877	593	184	11	301
Spools, Apparatus for making metallic	G. W. Billings	197,011	Nov. 13, 1877	292	86	12	810
Spools, Machine for winding thread on	W. Clark	189,697	Apr. 17, 1877	700	215, 116	11	666
Spoolers, Mechanism for operating the rock-shaft of yarn.	W. Bancroft	193,106	July 17, 1877	580	175	12	106
Spooling-guide	A. Partridge	195,228	Sept. 18, 1877	502	148	12	486
Spooling-machine bobbin-holder	A. C. Slater and T. C. Ball	193,290	July 17, 1877	762	235	12	131
Spooling mach ne, Thread	J. W. West	189,673	Apr. 17, 1877	677	209	11	663
Spooling-machine yarn-guide and cleaner	J. Garrett	187,120	Feb. 6, 1877	194	63	11	229
Spooling-machines, Stop-motion attachment for	F. Fearon	192,424	June 26, 1877	960	288	11	1131
Spooling-machines, Stop-motion for	J. Wild	191,738	June 5, 1877	212	67	11	1005
Spoon-blank die	H. W. Bassett	191,639	June 5, 1877	121	37	11	992
Spoon-handle	P. Lesson	196,683	Oct. 30, 1877	1049	364	12	743
Spoon, Mustache	R. Williams	195,067	Sept. 11, 1877	322	97	12	452
Spoon, Sheet-metal	H. C. Milligan	194,709	Aug. 28, 1877	940	280	12	384
Spout and strainer	F. G. and W. F. Niedringhaus	189,640	Aug. 17, 1877	641	199	11	658
Spout and strainer	F. G. and W. F. Niedringhaus	189,641	Aug. 17, 1877	642	199	11	659
Spouts and strainers, Attaching	F. G. and W. F. Niedringhaus	186,432	Jan. 23, 1877	643	197	11	120
Spring: *See* Air-spring. Car-spring. Carriage-spring. Coiled spring. Door-spring. Elliptic spring. Furniture-spring. Hoop-skirt spring. Motor-spring. Spiral spring. Vehicle-spring. Vehicle-platform spring. Vehicle-seat spring. Vehicle torsion-spring. Voluto motor-spring. Wagon-spring. Wagon-seat spring. Watch-case spring.							
Spring clasp and hook	J. W. Knause	191,686	June 5, 1877	166	51	11	998
Spring-coiling machine	E. C. Dicey	197,460	Nov. 27, 1877	780	233	12	899
Spring-elevator	R. Haskins	197,362	Nov. 20, 1877	666	199	12	874
Spring-motor	E. W. Broadnax and B. Cohen	197,822	Dec. 4, 1877	115	36	12	962
Spring-motor	P. Cavalier	195,795	Oct. 2, 1877	101	30	12	576
Spring-motor	I. Solomon	185,872	Jan. 2, 1877	55	17	11	16
Spring-motor	G. Underhill	196,503	Oct. 23, 1877	862	248	12	705
Spring-seat	H. B. Cobb	185,851	Jan. 2, 1877	37	11	11	13
Spring-seat	F. M. Hubbard	188,140	Mar. 6, 1877	172	53	11	403
Spring-seat riser	W. H. H. Snellbaker	186,046	Jan. 9, 1877	233	72	11	48
Spring shackle and step, Combined	R. Doty	194,863	Sept. 4, 1877	107	33	12	415
Spring shackle-link	H. K. Porter	196,478	Oct. 23, 1877	831	239	12	702
Spring-shaping machine	E. C. Lewis	188,922	Mar. 27, 1877	978	299	11	536
Sprinkler: *See* Clothes-sprinkler. Garden-sprinkler. Lawn-sprinkler. Street-sprinkler.							
Sprinkler	E. K. Walker and T. Roddick	192,100	June 19, 1877	603	184	11	1073
Spur	A. Buermann	186,985	Feb. 6, 1877	74	25	11	211
Spur	A. Mills	193,342	July 24, 1877	832	255	12	149
Spur, Heel	G. W. Elliott	198,010	Dec. 11, 1877	311	95	12	1060
Square	J. C. Marshall	185,830	Jan. 2, 1877	18	6	11	11
Square	C. A. Schrier	190,519	May 8, 1877	423	123	11	809
Square, Dressmaker's	C. H. Griffin	195,925	Oct. 9, 1877	244	69	12	603
Square, Framing	C. Lamb	194,605	Aug. 28, 1877	846	252	12	371
Squares, Attachment for carpenter's	J. Daniels	194,587	Aug. 28, 1877	832	247	12	368
Squares, Shade for try	C. B. Hopkins	189,737	Apr. 17, 1877	744	228	11	671

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Squirt-can	J. W. Tallmadge	186,442	Jan. 23, 1877	657	201	11	121
Stable scuttle and trap	W. M. Watkins	192,722	July 3, 1877	166	47	12	36
Stable scuttle or hatchway	N. Smalley	194,791	Sept. 4, 1877	37	12	12	405
Stage scenery and operating mechanism	H. F. Parsons	193,457	July 24, 1877	940	285 286	12	164
Stair-rail wreaths, Machine for molding	J. B. Bowden	191,748	June 12, 1877	233	74	11	1013
Stair-rod, Ornamental	J. H. Peterson	187,555	Feb. 20, 1877	642	200	11	307
Stalk-cutter	M. W. and P. Resser	193,997	Aug. 7, 1877	197	59, 60	12	261
Stalk-cutter and hay-rake, Combined	W. W. Fuller	190,484	May 8, 1877	389	113	11	805
Stalk-cutter, Rotary	O. D. Johnson and J. F. Bracket	185,931	Jan. 2, 1877	122	36	11	24
Stalk-cutter, Sulky	M. E. Roach	193,729	July 31, 1877	1228	358	12	213
Stall, Cattle	E. E. Waddle	191,086	May 22, 1877	1010	301	11	902
Stall-floor	G. S. Young	187,794	Feb. 27, 1877	896	279	11	349
Stamp, Branding	R. G. Smeaton	196,711	Oct. 30, 1877	1078	313	12	747
Stamp, Branding	T. F. Taylor	186,179	Jan. 9, 1877	362	110	11	65
Stamp, Branding	J. D. Trapp	187,785	Feb. 27, 1877	887	276	11	348
Stamp canceler and postmarker, Perforating	G. F. Almy	194,884	Sept. 4, 1877	125	39	12	418
Stamp, Canceling	A. Daul	196,638	Oct. 30, 1877	1006	293	12	738
Stamp, Canceling	W. D. Wesson	195,552	Sept. 25, 1877	821	244	12	540
Stamp-canceling device	C. C. Egerton	194,343	Aug. 21, 1877	590	176	12	327
Stamp for marking logs, Hand	J. L. Major	195,624	Sept. 25, 1877	891	264	12	550
Stamp for tickets, Hand	E. T. Jones	197,518	Nov. 27, 1877	840	251	12	907
Stamp, Hand	H. W. Bardwell	193,070	July 17, 1877	532	161	12	101
Stamp, Hand	H. S. Blunt	186,707	Jan. 30, 1877	908	281	11	165
Stamp, Hand	S. F. Gratz	187,129	Feb. 6, 1877	201	66	11	230
Stamp, Hand	B. B. Hill	185,862	Jan. 2, 1877	47	15	11	15
Stamp, Hand	E. L. Tarbox	191,265	May 29, 1877	1200	360	11	936
Stamp, Hand	L. Tilton	191,623	June 5, 1877	105	32	11	990
Stamp holder, Postage	J. W. Gladding and G. W. Hauxhurst.	188,122	Mar. 6, 1877	151	46	11	401
Stamp, India-rubber	S. B. Scott	193,187	July 17, 1877	646	196	12	116
Stamp-mill	G. Downing	191,521	June 5, 1877	11	3	11	978
Stamp-mill	H. H. Scoville, jr	193,289	July 17, 1877	760	234	12	131
Stamp-mill feeder	C. C. Stevenson	196,261	Oct. 16, 1877	606	174	12	661
Stamp-mill mortar	H. H. Scoville, jr	195,457	Sept. 25, 1877	735	217	12	528
Stamp, Ore	T. A. Cochrane	192,567	July 3, 1877	11	4	12	14
Stamp, Ore	T. Schofield	191,889	June 12, 1877	369	113	11	1030
Stamp, Perforating	G. F. Almy	189,009	Apr. 3, 1877	1	1	11	559
Stamp, Perforating	W. W. Eaton	196,647	Oct. 30, 1877	1018	296	12	740
Stamp, Perforating	J. L. Wickers	189,000	Mar. 27, 1877	1051	324	11	546
Stamp, Postage and revenue	J. Sangster	190,376	May 1, 1877	256	76	11	780
Stamp, Postage or revenue	D. G. Beaumont	192,893	July 10, 1877	360	106	12	69
Stamp, Postage or revenue	W. W. Bierce	192,968	July 10, 1877	429	128	12	79
Stamp, Postage or revenue	W. W. Bierce	194,212	Aug. 14, 1877	440	134	12	300
Stamp, Revenue	E. A. Locke	193,167	July 17, 1877	629	191	12	114
Stamp, Steam	J. B. Ellenbecker	198,509	Dec. 25, 1877	839	255	12	1091
Stamps, checks, bonds, &c., Preventing fraud in	T. C. Van Nüys	197,303	Nov. 20, 1877	606		12	864
Stamps, Ore-feeder for	M. P. Boss	189,917	Apr. 24, 1877	943	288	11	706
Stamper-shanks, Construction of disks for screwed	J. Cliff	190,668	May 15, 1877	595	176	11	839
Stanchion	Z. W. Smith	192,466	June 26, 1877	997	300	11	1136
Stanchion	A. H. Taft	186,767	Jan. 30, 1877	964	299	11	173
Stand: *See* Barrel-stand. Compositor's-stand. Croquet-stand. Dish-stand. Fire-iron stand. Flower-stand. Flower and merchandise stand. Hat and bonnet stand. Iron table-stand. Music-stand. Portable furnace-stand. Sad-iron stand. Show-stand. Spool-stand. Tinner's machine-stand. Wash-stand. Wire-stand. Work-stand.							
Stand for holding funnels, measures, &c	S. M. Preston	192,348	June 26, 1877	889	267	11	1122
Stand for smoothing fabrics	J. F. Frese	195,756	Oct. 2, 1877	65	19	12	570
Staples, Device for inserting metallic	H. R. Heyl	195,603	Sept. 25, 1877	872	259	12	547
Staples, Mechanism for automatically selecting and presenting.	J. W. Bicknell	190,268	May 1, 1877	154	45	11	766
Starch by centrifugal action, Drying and purifying	F. Melkersman	195,718	Oct. 2, 1877	30	9	12	564
Station-indicator	G. W. Averell	197,309	Nov. 20, 1877	611	181	12	864
Station-indicator	J. W. Grayden	192,985	July 10, 1877	442	133	12	81
Station-indicator	G. M. Guild	197,728	Dec. 4, 1877	20	6	12	949
Station-indicator	J. H. Herzog	189,039	Apr. 3, 1877	26	9	11	562
Station-indicator	C. Jensen	188,915	Mar. 27, 1877	972	297	11	536
Station-indicator	E. Köhler and F. B. Turck	198,395	Dec. 18, 1877	712	216	12	1065
Station-indicator	J. Mantell	191,452	May 29, 1877	1370	413	11	959
Station-indicator	J. Ort	190,072	Apr. 24, 1877	1112	3 8	11	727
Station-indicator	J. P. Schmitz	189,794	Apr. 17, 1877	802	246	11	679
Station-indicator	W. E. Schneider	196,169	Oct. 16, 1877	507	148	12	648
Stave chamfering and crozing machine	B. W. Sutherlen	196,948	Nov. 6, 1877	218	64, 65	12	790
Stave-dressing machine	A. Luckhaupt	197,521	Nov. 27, 1877	843	252	12	908
Station-indicator for railways, Electric	J. I. Conklin, jr	190,198	May 1, 1877	85	24	11	157
Stave-jointing machine	F. Arbey	186,704	Jan. 30, 1877	906	280	11	165
Stave-jointing machine	J. Hazard and J. Greenwood	187,757	Feb. 27, 1877	856	267	11	344
Stave-jointing machine	J. S. Milton	187,037	Feb. 6, 1877	116	38	11	218
Stave-jointing machine	J. Naylor, jr., and P. Vollmar	197,394	Nov. 20, 1877	697	209	12	878
Stave-jointing machine	L. R. Palmer	188,257	Mar. 13, 1877	299	94	11	426
Stave-sawing machine	A. Knipper	191,158	May 22, 1877	1078	323	11	911
Stave-sawing machine	J. Miller and S. Head	196,691	Oct. 30, 1877	1056	306 307	12	744
Stave-sawing machine	G. C. Stevens	190,452	May 8, 1877	356	103	11	801
Staves, Machine for crozing, chamfering, and equalizing.	S. F. Maxwell	192,122	June 19, 1877	627	191	11	1076
Stay-end clip	M. Seward	198,051	Dec. 11, 1877	345	107	12	1005
Steak-tenderer	A. J. Davis	187,360	Feb. 13, 1877	445	140	11	274

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Steam air-heater	E. Hays	197,273	Nov. 20, 1877	576	170	12	859
Steam, air, or gas engines, Applying power in	W. R. Comings	192,637	July 3, 1877	83	25	12	23
Steam and air brake	H. H. Taylor and A. McCamish	189,147	Apr. 3, 1877	118	42	11	575
Steam and gas generating apparatus, Combined	W. F. Browne	195,088	Sept. 11, 1877	346	104, 105	12	466
Steam-boiler	D. N. Allen and J. M. Farrington	193,069	July 17, 1877	531	161	12	101
Steam-boiler	C. E. Barber and G. A. Porter	192,481	June 26, 1877	1008	305	11	1138
Steam-boiler	D. Burbank	187,567	Feb. 20, 1877	603	187	11	302
Steam-boiler	H. S. Coleman	193,848	Aug. 7, 1877	47	15	12	241
Steam-boiler	R. C. Duchesne	192,685	July 3, 1877	138	38	12	31
Steam-boiler	P. Fitzgibbons	189,900	Apr. 24, 1877	956	292	11	708
Steam-boiler	J. Gates	193,329	July 24, 1877	820	251	12	147
Steam-boiler	J. Hughes	193,253	July 17, 1877	723	221	12	126
Steam-boiler	G. M. Kraft	187,869	Feb. 27, 1877	970	301	11	359
Steam-boiler	F. Mathews	188,301	Mar. 13, 1877	343	108	11	432
Steam-boiler	G. H. Millen and W. Feely	193,126	July 17, 1877	595	180	12	109
Steam-boiler	N. Roser	196,482	Oct. 23, 1877	834	240	12	702
Steam-boiler	C. D. Smith	190,093	Apr. 24, 1877	1134	345	11	730
Steam boiler and superheater	S. N. Carvalho	192,678	July 3, 1877	133	37	12	30
Steam-boiler attachment	S. Kemper	192,265	June 19, 1877	779	237	11	1096
Steam-boiler circulating device	H. S. Coleman	190,743	May 15, 1877	671	199	11	849
Steam-boiler, Compound	R. R. Hind	192,165	June 19, 1877	670	205	11	1082
Steam-boiler, Drop-tube	C. K. Heath	189,216	Apr. 3, 1877	181	62	11	583
Steam-boiler, Duplex	J. B. Rivera	196,597	Oct. 30, 1877	967	280	12	732
Steam-boiler fire-box	B. Hershey	189,219	Apr. 3, 1877	184	63	11	583
Steam-boiler fire-grate	S. Regan	194,263	Aug. 14, 1877	490	149	12	307
Steam-boiler heater and feeder	A. De Beaumont	187,825	Feb. 27, 1877	928	288	11	354
Steam-boiler heater and feeder	J. B. Hyde	198,113	Dec. 11, 1877	409	128	12	1014
Steam-boiler, Portable	W. R. Michener	193,378	July 24, 1877	866	265	12	153
Steam-boiler, Sectional	E. H. Graham	190,906	May 22, 1877	897	265	11	887
Steam-boiler, Sectional	F. Trump	187,200	Feb. 6, 1877	261	85, 86	11	238
Steam-boiler, Sectional	T. Weston	190,457	May 8, 1877	362	105	11	801
Steam-boiler, Sectional	W. H. Wilson	187,692	Feb. 20, 1877	769	239	11	324
Steam-boiler tube-fastening	D. Hess	187,382	Feb. 13, 1877	463	145	11	277
Steam-boiler water-feeder	D. Iffland	190,044	Apr. 24, 1877	1079	328	11	723
Steam-boiler water-gage	D. A. Woodbury	194,796	Sept. 4, 1877	41	13	12	406
Steam-boilers, Attachment for vertical	C. M. Miller	194,527	Aug. 28, 1877	781	232	12	361
Steam-boilers, Circulating device for	W. Ord	186,493	Jan. 23, 1877	698	214	11	127
Steam-boilers, Circulating device in	J. T. Wainwright	186,774	Jan. 30, 1877	971	301	11	174
Steam-boilers, Construction of	D. Sullivan	189,585	Apr. 17, 1877	593	183	11	652
Steam-boilers, Device for extracting mud from	T. Craney	191,939	June 12, 1877	420	130	11	1037
Steam-boilers, Purifying water in	S. D. Gilson	194,084	Aug. 14, 1877	302	90	12	282
Steam, Device for preventing the noise of escaping	H. Gucls	195,003	Sept. 11, 1877	256	78	12	443
Steam-engine	J. J. Anthony	195,246	Sept. 18, 1877	525	153	12	489
Steam-engine	R. H. Edson	194,034	Aug. 14, 1877	253	75	12	276
Steam-engine	L. H. Hall	190,851	May 15, 1877	761	226	11	862
Steam-engine	W. J. F. Liddell	190,441	May 8, 1877	343	100	11	799
Steam-engine	H. E. Marchand	187,156	Feb. 6, 1877	225	73, 74	11	233
Steam-engine	S. Warrick and G. S. Brush	190,938	May 15, 1877	830	252	11	873
Steam-engine bed-frame	F. B. Rice	187,984	Mar. 6, 1877	29	7	11	384
Steam-engine boiler, Precipitator for	L. Shook	192,194	June 19, 1877	700	214	11	1085
Steam-engine cross-head	D. A. Woodbury	194,207	Aug. 14, 1877	436	132	12	300
Steam-engine, Duplex balanced	H. Merrill	193,772	July 31, 1877	1273	382	12	220
Steam-engine link	D. A. Woodbury	188,273	Mar. 13, 1877	315	100	11	428
Steam-engine link-motion	F. Fischer	192,158	June 19, 1877	665	203	11	1081
Steam-engine lubricating device	W. Moses	190,722	May 15, 1877	652	193, 194	11	846
Steam-engine lubricator	J. Harper	187,849	Feb. 27, 1877	953	296	11	357
Steam-engine lubricator	J. Harper	191,425	May 29, 1877	1331	405	11	955
Steam-engine lubricator	W. R. Petrie	189,875	Apr. 24, 1877	904	276	11	700
Steam-engine lubricator	J. Powell	189,651	Apr. 17, 1877	649	203	11	660
Steam-engine, Rotary	A. Vivarttas	193,133	July 17, 1877	602	182	12	109
Steam-engine stuffing-box	T. H. Hopkins	196,978	Nov. 13, 1877	258	77	12	805
Steam-engine stuffing-box	J. Loftus	194,096	Aug. 28, 1877	930	276	12	382
Steam-engine stuffing-box	C. T. Sleeper	191,892	June 12, 1877	372	114	11	1030
Steam-engine stuffing-box	C. T. Sleeper	192,026	June 12, 1877	506	155	11	1048
Steam-engine, Triple-cylinder	P. Brotherhood	196,070	Oct. 16, 1877	401	116, 117	12	633
Steam-engines, Air-pump connection for	G. H. Corliss	190,958	May 22, 1877	889	263	11	886
Steam-engines, Automatic expansion-gearing for	A. Cunningham	195,804	Oct. 2, 1877	108	32	12	577
Steam-engines, Crank-shank for	D. A. Woodbury	191,790	June 12, 1877	273	84	11	1018
Steam from boilers, Device for transmitting	O. Gebauer	198,373	Dec. 18, 1877	692	211	12	1061
Steam-gage siphon	J. S. Critchley	195,444	Sept. 25, 1877	720	213	12	526
Steam-generator	T. F. Butterfield	196,559	Oct. 30, 1877	932	270	12	727
Steam-generator	J. and G. Firmenich	191,004	May 22, 1877	935	277	11	892
Steam-generator	T. L. Jones	194,440	Aug. 21, 1877	682	204	12	339
Steam-generator	W. Lowe	193,526	July 24, 1877	1010	304	12	173
Steam-generator	D. Renshaw and G. B. N. Tower	196,825	Nov. 6, 1877	85	26, 27	12	773
Steam-generator	D. Renshaw and G. B. N. Tower	198,213	Dec. 18, 1877	531	164	12	1038
Steam-generator	C. S. Smith	190,632	May 8, 1877	535	159	11	825
Steam-generator	A. Van Horn	188,990	Mar. 27, 1877	1044	321	11	546
Steam-generator	A. Winton	186,511	Jan. 23, 1877	713	219	11	129
Steam-generator, Circulating	H. C. Bowers	188,575	Mar. 20, 1877	618	191	11	479
Steam-generator for warming buildings, &c	B. Holly	193,085	July 17, 1877	549	166	12	103
Steam-generator, Sectional	J. A. Reed	192,389	June 26, 1877	932	279	11	1127
Steam-generator, Water-coil	G. H. Babcock and S. Wilcox	192,214	June 19, 1877	719	220	11	1088
Steam-generator, Water-tube	J. B. Herreshoff	190,857	May 15, 1877	767	228	11	863
Steam-generators, Electrical anti-incrustator for	E. Field	194,666	Aug. 28, 1877	900	269	12	379
Steam-generators, Fusible plug for	H. Hiller	195,367	Sept. 18, 1877	632	187	12	505
Steam-generators, Setting	E. D. Wood	191,791	June 12, 1877	273	85	11	1018
Steam-heater	R. G. Brown	191,796	June 12, 1877	277	86	11	1019
Steam-heating apparatus	C. and J. Le Bosquet	190,054	Apr. 24, 1877	1092	332	11	725

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Steam in heating, &c., Apparatus for utilizing	B. Holly	193,086	July 17, 1877	551	166, 167, 168	12	103
Steam-pipe covering	G. H. Levis	195,618	Sept. 25, 1877	885	263	12	549
Steam-pipes, Composition covering for	P. Carey	189,301	Apr. 10, 1877	298	94	11	605
Steam-pipes, Lagging for covering	G. B. Wiestling	192,474	June 26, 1877	1002	302	11	1137
Steam-superheating apparatus	C. J. Eames	186,465	Jan. 23, 1877	676	207	11	124
Steam-trap	G. W. Blake	196,109	Oct. 16, 1877	451	131	12	640
Steam-trap	W. Conner	195,984	Oct. 9, 1877	308	86	12	612
Steam-trap	D. Edwards	193,938	Aug. 7, 1877	140	42	12	253
Steam trap	T. Kieley	190,719	May 15, 1877	650	192	11	846
Steam-trap	T. Kieley	195,933	Oct. 9, 1877	256	72	12	605
Steam-trap	T. Kieley	197,782	Dec. 4, 1877	79	24	12	937
Steam-trap	C. F. Pike	196,764	Nov. 6, 1877	27	8	12	764
Steam-trap	J. J. Royle	188,416	Mar. 13, 1877	459	143	11	449
Steam-trap	T. G. Springer	196,494	Oct. 23, 1877	849	244	12	704
Steam-trap	C. H. Yeager	189,591	Apr. 17, 1877	599	185	11	653
Steam trap and boiler feeder	E. Fox	186,820	Jan. 30, 1877	1017	315	11	180
Steam trap and boiler feeder	B. Vandecar and H. V. Harper	187,331	Feb. 13, 1877	417	131	11	271
Steam trap, Return	T. E. McNeill	198,138	Dec. 11, 1877	435	136	12	1018
Steam, Utilizing exhaust	W. H. Thompsen	190,387	May 1, 1877	273	80	11	781
Steam-whistle	J. Einig	186,718	Jan. 30, 1877	918	284	11	166
Steamboat-engine indicator	L. Shook	194,475	Aug. 21, 1877	721	214	12	344
Steamboat smoke-stack	A. L. Rouze, B. A. Ledford, and J. O'Brien.	191,614	June 5, 1877	95	30	11	989
Steamer, Agricultural	J. T. King	193,966	Aug. 7, 1877	166	51	12	257
Steamer, Feed	A. Johnson	189,863	Apr. 24, 1877	889	272	11	699
Steamer, Feed	R. M. Rice and F. M. Gortner	192,010	June 12, 1877	492	151	11	1046
Steamer for cooking feed	A. K. Brown	190,545	May 8, 1877	447	132	11	812
Steamer, Grain	E. C. Jones	193,711	July 31, 1877	1213	364	12	211
Steaming food for stock, Apparatus for	A. Newkirk	196,162	Oct. 16, 1877	501	146	12	647
Steel, Bath for tempering	A. Kalstrom	187,977	Mar. 6, 1877	22		11	383
Steel, Butcher's	W. T. Nicholson	198,668	Dec. 25, 1877	992	301	12	1114
Steel, Converter for the manufacture of Bessemer	L. Witthöfft	195,196	Sept. 11, 1877	456	136	12	472
Steel, Manufacture of	M. J. Hamilton	195,891	Oct. 9, 1877	208	59	12	599
Steel, Manufacture of	H. Schierloh	188,820	Mar. 27, 1877	883		11	523
Steel, Manufacturing Bessemer	R. W. Hunt and A. Wendel	187,386	Feb. 13, 1877	467		11	277
Steel plates and blocks, Manufacture of	J. Yates	188,458	Mar. 13, 1877	503		11	455
Steel scrap, Piling Bessemer	P. and W. B. Hayden	186,836	Jan. 30, 1877	1040	321	11	182
Steel scrap, Utilizing Bessemer	O. Williams	197,193	Nov. 13, 1877	481		12	838
Steel, Tempering and forming articles of	G. F. Simonds	188,198	Mar. 6, 1877	236	74	11	411
Steering apparatus	J. P. Dorr	198,004	Dec. 11, 1877	306	93	12	999
Steering apparatus	W. H. Nelson	192,274	June 19, 1877	787	239	11	1097
Steering apparatus	E. L. Young	190,177	May 1, 1877	66	18	11	755
Steering apparatus, Canal-boat	B. R. Cole	190,283	May 1, 1877	170	50	11	768
Steering apparatus for vessels, Steam	F. E. Sickels	196,709	Oct. 30, 1877	1074	312	12	747
Steering apparatus indicator	L. Shook	194,476	Aug. 21, 1877	722	215	12	344
Steering apparatus, Power	A. Crosby	188,859	Mar. 27, 1877	919	279, 280	11	528
Steering apparatus, Surge-reliever for	R. M. Mountfort	191,070	May 22, 1877	996	297	11	900
Steering-gear, Auxiliary	J. Davies	194,658	Aug. 28, 1877	894	267	12	378
Steering-gear for vessels	J. P. Manton	197,874	Dec. 4, 1877	167	51	12	970
Stench-trap	T. Boldemann	186,532	Jan. 23, 1877	734	226	11	132
Stench-trap	S. Buhrer	197,993	Dec. 11, 1877	294	90	12	997
Stench-trap	A. K. Grim and J. B. Low	198,457	Dec. 25, 1877	787	239	12	1084
Stench-trap	P. F. Morey	189,570	Apr. 17, 1877	577	179	11	650
Stench-trap	O. M. Rice	193,831	Aug. 7, 1877	33	11	12	239
Stench-trap	F. W. Volkman	198,501	Dec. 25, 1877	832	252	12	1090
Stench-trap for catch-basins and sewers	H. W. Clapp	189,549	Apr. 17, 1877	554	172	11	647
Stench-trap for sinks, &c	S. Buhrer	194,329	Aug. 21, 1877	575	172	12	324
Stencil-plate	J. T. Wright and O. G. Bryant	186,395	Jan. 16, 1877	597	183	11	101
Step-ladder chair	H. Goffette	190,027	Apr. 24, 1877	1061	322	11	721
Stereoscope	A. Beckers	188,769	Mar. 27, 1877	816	250	11	515
Stereoscope	M. J. Rice	190,100	May 1, 1877	50	14	11	753
Still	J. G. Ellerhorst	185,900	Jan. 2, 1877	87	26	11	19
Still	T. Gaff	189,448	Apr. 10, 1877	440	138	11	623
Still, Oil	J. T. Coleman	191,406	May 29, 1877	1319	400	11	953
Still, Oil	S. Van Syckel	191,204	May 22, 1877	1125	336	11	918
Stilts	J. S. Ebert	190,134	May 1, 1877	21	6	11	749
Stilts, Adjustable	C. S. Shu'e	196,941	Nov. 6, 1877	213	63	12	789
Stirrup	S. J. Harkness	191,851	June 12, 1877	334	104	11	1026
Stirrup	H. M. Hollingsworth	196,900	Nov. 6, 1877	170	49	12	784
Stirrup	H. H. Knight	186,853	Jan. 30, 1877	1058	327	11	184
Stirrup	H. H. Knight	189,363	Apr. 10, 1877	360	116	11	613
Stirrup	H. H. Knight	198,630	Dec. 25, 1877	954	291	12	1109
Stirrup	S. J. McDonald and J. W. Burton	194,609	Aug. 28, 1877	849	253	12	371
Stirrup	C. E. Wallin	193,467	July 24, 1877	949	288	12	166
Stirrup, Safety	W. B. Conway	192,976	July 10, 1877	436	131	12	80
Stock, Device for watering	I. Allen	186,094	Jan. 9, 1877	283	85	11	54
Stock, Device for watering	A. B. Ramey	185,869	Jan. 2, 1877	53	17	11	15
Stock-feeder	O. M. Hayden and G. A. Knowles	194,819	Sept. 4, 1877	66	21	12	409
Stock register, Live	P. Lyttleton	198,307	Dec. 18, 1877	628	191	12	1052
Stocking	M. Landenberger, jr	188,921	Mar. 27, 1877	977	299	11	536
Stocking-protector	C. F. Langford	197,868	Dec. 4, 1877	159	48	12	969
Stocking-supporter	J. D. Banfield	197,587	Nov. 27, 1877	912	272	12	918
Stocking-supporter	G. B. Bolton	198,183	Dec. 18, 1877	498	155	12	1033
Stocking-supporter	E. L. Demorest and T. W. G. Cook.	186,992	Feb. 6, 1877	79	27	11	212
Stocking-supporter	C. C. Shelby	195,662	Sept. 25, 1877	929	277	12	556
Stone and ore crusher	C. E. Hall	187,375	Feb. 13, 1877	457	144	11	276
Stone and ore crusher	H. R. Marsden	187,414	Feb. 13, 1877	494	153	11	280
Stone, Artificial	O. A. Davis	194,297	Aug. 21, 1877	539		12	320
Stone, Artificial	A. S. Vorse	194,629	Aug. 28, 1877	866		12	374

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Stone composition, Artificial	M. Nolan	188,660	Mar. 20, 1877	704		11	491
Stone compound, Artificial	G. A. Goodrich and F. M. Spain	196,219	Oct. 16, 1877	559		12	655
Stone compound, Artificial	C. E. Peirce	191,999	June 12, 1877	479		11	1044
Stone compound, Artificial	C. Schaffer	188,679	Mar. 20, 1877	721		11	493
Stone compound, Artificial	J. H. Thorp	195,056	Sept. 11, 1877	314		12	451
Stone compound, Artificial	C. Weiland	186,647	Jan. 23, 1877	815		11	147
Stone compound, Artificial	J. L. Wray	187,338	Feb. 13, 1877	422		11	272
Stone cutting and dressing machine	G. Campbell	195,701	Oct. 2, 1877	10	3	12	562
Stone-dressing hammer	J. Hartnoll	185,999	Jan. 2, 1877	184	57	11	33
Stone-dressing hammer	A. McDonald	197,283	Nov. 20, 1877	585	174	12	861
Stone-drilling machine	F. Johnson	191,657	May 22, 1877	986	293	11	898
Stone-drilling machine	S. C. Nichols	195,638	Sept. 25, 1877	905	269	12	552
Stone-drilling machine	S. Palmer	195,841	Oct. 2, 1877	146	42	12	582
Stone-lathe	F. Kesseler	195,021	Sept. 11, 1877	276	81	12	446
Stone-picking machine	C. Fuller	194,346	Aug. 21, 1877	592	177	12	337
Stone-planing machine	J. Hamilton and F. Frasi	196,087	Oct. 16, 1877	421	122, 123	12	636
Stone-quarrying machine	J. B. McRae	193,171	July 17, 1877	633	192	12	114
Stone, Sawing	R. A. Tilghman	187,239	Feb. 13, 1877	321	104	11	258
Stone-sawing machine	J. M. Ballon	195,560	Sept. 25, 1877	830	246	12	542
Stone-sawing machine	H. Cottrell	194,957	Sept. 11, 1877	212	66	12	437
Stone, Surfacing	J. M. Poole	194,879	Sept. 4, 1877	122	37	12	417
Stone, Tool for shaping and dressing	H. A. Kimball	191,241	May 29, 1877	1178	353	11	933
Stoneware jar	D. S. Chesebro	186,412	Jan. 23, 1877	625	190	11	117
Stoneware-kiln	C. Gladding	197,626	Nov. 27, 1877	955	284	12	924
Stook-holder	G. Sax	192,457	June 26, 1877	989	298	11	1135
Stool, Camp	E. W. Gourd	192,162	June 19, 1877	668	204	11	1081
Stool, Camp	E. M. Sammis	191,182	May 22, 1877	1102	329	11	915
Stool, Folding	E. Matteson	197,558	Nov. 27, 1877	883	263	12	914
Stool, Milking	E. Avey	191,090	May 22, 1877	1013	302	11	903
Stool, Milking	O. G. Scriven	196,543	Oct. 30, 1877	915	265	12	725
Stool, Milk-pail	M. A. Sprague	196,396	Oct. 23, 1877	751	217	12	691
Stool, Music	G. P. White	186,071	Jan. 9, 1877	260	78	11	51
Stool, Piano	G. A. Ramsoyer	186,756	Jan. 30, 1877	952	296	11	171
Stool, Piano	G. A. Ramsoyer	186,757	Jan. 30, 1877	953	296	11	172
Stool, Spring-seat	H. M. Hutchinson and M. V. Lunger.	186,841	Jan. 30, 1877	1045	322	11	183
Stool, Spring-supported	W. C. Huffman	186,570	Jan. 23, 1877	770	237, 238	11	137
Stools, Screw for piano	G. W. Archer	186,191	Jan. 16, 1877	386	117	11	75
Stop-motion fork-slide	J. McCaffrey, jr	191,697	June 5, 1877	176	55	11	1000
Stopper: *See* Basin-stopper. Bottle-stopper. Cable-stopper. Hose-leak stopper. Mucilage-bottle stopper. Mucilage-holder stopper. Oil-can stopper.							
Stopper attachment	B. Arnold	191,295	May 29, 1877	1228	369	11	940
Stopper-fastener	F. J. Seyhold	198,221	Dec. 18, 1877	537	167	12	1039
Stopper-fastener	J. L. Stewart	196,260	Oct. 16, 1877	605	174	12	661
Stopper-lock for decanters, &c	E. H. Guild	190,579	May 8, 1877	479	143	11	817
Stove	C. Dion	191,319	May 29, 1877	1246	375	11	943
Stove	T. Gemmell	195,812	Oct. 2, 1877	117	34	12	578
Stove	J. Gladding, 3d	191,580	June 5, 1877	65	20	11	985
Stove	C. A. Hamlin	189,557	Apr. 17, 1877	563	175	11	648
Stove	W. H. Hoadley	193,655	July 31, 1877	1167	349	12	204
Stove	J. Jewett	198,243	Dec. 18, 1877	578	174	12	1044
Stove	M. Jones	195,511	Sept. 25, 1877	789	233	12	535
Stove	C. Lyman	192,925	July 10, 1877	387	115	12	73
Stove	A. Lynd	191,807	June 12, 1877	290	90	11	1020
Stove	T. J. March	198,034	Dec. 11, 1877	329	102	12	1003
Stove	J. Musgrave, T. F. Shillington, and J. A. Hanna.	197,161	Nov. 13, 1877	448	132	12	833
Stove	B. Rice	195,231	Sept. 18, 1877	505	148	12	487
Stove	M. A. Shelby	193,621	July 31, 1877	1124	337	12	199
Stove	R. Simpson	192,088	June 19, 1877	592	180	11	1072
Stove	H. M. Smith	188,973	Mar. 27, 1877	1029	316	11	543
Stove	J. Spear	190,635	May 8, 1877	539	160, 161	11	825
Stove	M. L. Wood	186,286	Jan. 16, 1877	467	143	11	86
Stove, &c., air-feeder	G. C. Palm	197,794	Dec. 4, 1877	90	27	12	958
Stove air-heater, Lamp	P. Mihan	160,050	Jan. 9, 1877	242	73	11	49
Stove, Air-heating	J. B. Oldershaw	188,400	Mar. 13, 1877	446	138	11	446
Stove and fire-extinguisher, Railway-car	W. D. Pegram and W. H. Hotchkiss.	190,780	May 15, 1877	701	207	11	853
Stove and furnace	A. C. Rand	196,700	Oct. 30, 1877	1064	309	12	746
Stove and furnace grate	F. L. Holmes	197,634	Nov. 27, 1877	962	286, 287	12	925
Stove and furnace grate	D. Richmond	194,534	Aug. 28, 1877	786	233, 234	12	362
Stove and heater	J. N. Hersh	188,361	Mar. 13, 1877	402	125	11	440
Stove and heater combined, Cooking	J. E. Corley	194,413	Aug. 21, 1877	652	196	12	335
Stove and oven, Portable	W. Clifford	197,963	Dec. 11, 1877	268	82	12	993
Stove and range, Cooking	I. T. Montross	195,383	Sept. 18, 1877	649	192	12	508
Stove attachment for utilizing heat	H. McConnell	188,160	Mar. 6, 1877	192	59	11	406
Stove-board	J. S. Brooks	186,458	Jan. 23, 1877	671	205	11	123
Stove-board, platform, &c	H. L. Palmer	197,490	Nov. 27, 1877	810	242	12	903
Stove, Car	R. Hale	188,127	Mar. 6, 1877	159	49	11	401
Stove, Car	J. H. Prentice	187,774	Feb. 27, 1877	873	272	11	347
Stove-caster frame	E. H. Voorhees	189,531	Apr. 10, 1877	517	163	11	634
Stove, Coal-oil	M. H. Barnes	191,558	June 5, 1877	48	14	11	983
Stove, Coal-oil	J. A. Frey	185,908	Jan. 2, 1877	93	28, 29	11	20
Stove, Coal-oil	W. S. Potwin	195,950	Oct. 9, 1877	272	77	12	607
Stove, Coal-oil	J. W. Underwood	186,903	Jan. 30, 1877	1100	311	11	190
Stove, Cooking	A. V. Callahan	196,191	Oct. 16, 1877	532	154	12	652

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Stove, Cooking	B. F. Holbrook	196,528	Oct. 30, 1877	902	261	12	723
Stove, Cooking	R. J. King	194,918	Sept. 4, 1877	159	50	12	422
Stove, Cooking	C. T. Lynd	195,830	Oct. 2, 1877	135	39	12	580
Stove, Cooking	G. A. McFadden	197,785	Dec. 4, 1877	82	45	12	957
Stove, Cooking	E. P. Morong	189,127	Apr. 3, 1877	100	36	11	572
Stove, Cooking	D. E. Paris	191,706	June 5, 1877	183	57, 58	11	1001
Stove, Cooking	E. S. Shantz	188,966	Mar. 27, 1877	1024	315	11	543
Stove, Cooking	D. Stuart	198,431	Dec. 18, 1877	748	226	12	1070
Stove, Cooking	J. H. Troutman and W. H. H. Green.	196,271	Oct. 16, 1877	617	177, 178	12	663
Stove, Cooking	J. S. Van Buren and R. Z. Liddle.	190,648	May 8, 1877	555	165	11	827
Stove, Cooking	G. W. Walker	195,191	Sept. 11, 1877	451	134	12	472
Stove-cover	G. N. Bacon	188,564	Mar. 20, 1877	609	188	11	478
Stove door, Cook	J. Martin	192,521	June 26, 1877	1058	318	11	1144
Stove-door, Sliding	J. Cox	187,457	Feb. 20, 1877	555	171	11	296
Stove-drum	J. Hacker	188,622	Mar. 20, 1877	660	204	11	485
Stove-drum	G. W. Vosburgh and H. Van Slyck.	189,530	Apr. 10, 1877	516	162	11	634
Stove, Fire-place	J. K. Dimmick and F. A. Stine	195,104	Sept. 11, 1877	362	109	12	458
Stove for heating sad-irons	R. Martin	188,475	Mar. 20, 1877	531	163	11	467
Stove, Gas	W. C. McKenzie	191,988	June 12, 1877	468	144	11	1043
Stove, Gas	Z. McKinley and V. True	198,650	Dec. 25, 1877	975	297	12	1111
Stove, Gasoline	F. A. and A. B. Lyman	192,589	July 3, 1877	33	10	12	17
Stove, Gasoline	W. C. North	194,106	Aug. 14, 1877	341	102	12	286
Stove, Gasoline cooking	H. Wellington	190,393	May 1, 1877	279	82	11	782
Stove-grate	A. C. Barstow	188,038	Mar. 6, 1877	85	24	11	392
Stove-grate	H. Cribben	195,918	Oct. 9, 1877	236	67	12	602
Stove-grate	A. H. Scholfield	187,488	Feb. 20, 1877	584	181	11	360
Stove-grate	D. W. Smith	196,127	Oct. 16, 1877	471	137	12	643
Stove-grate clearing attachment	E. A. C. Fox	192,911	July 10, 1877	375	111	12	71
Stove, Heating	A. J. Baker	193,470	July 24, 1877	951	289	12	166
Stove, Heating	H. H. Bowman, S. H. Franklin, and C. L. Colby.	190,813	May 15, 1877	727	215	11	857
Stove, Heating	H. H. Bowman, S. H. Franklin, and C. L. Colby.	190,814	May 15, 1877	729	216	11	857
Stove, Heating	N. A. Boynton	197,819	Dec. 4, 1877	112	34, 35	12	962
Stove, Heating	A. H. Chase	193,690	July 31, 1877	1197	358	12	209
Stove, Heating	D. B. Eberly	198,007	Dec. 11, 1877	308	94	12	999
Stove, Heating	T. Gemmell	196,007	Oct. 9, 1877	329	93	12	615
Stove, Heating	J. E. Gridley	194,552	Aug. 28, 1877	802	239	12	365
Stove, Heating	J. A. Jones	198,394	Dec. 18, 1877	711	216	12	1064
Stove, Heating	F. D. Livermore	197,644	Nov. 27, 1877	971	289	12	926
Stove, Heating	E. L. Matteson	192,774	July 3, 1877	215	62	12	42
Stove, Heating	S. Raymond	197,664	Nov. 27, 1877	987	295	12	929
Stove, Heating	E. Stewart	189,280	Apr. 3, 1877	254	84	11	592
Stove, Heating	D. Stuart and S. Bridge	197,680	Nov. 27, 1877	1001	299	12	931
Stove, Heating	T. White	191,499	May 29, 1877	1428	430	11	965
Stove, Heating and cooking	B. Dnerstock	193,233	July 17, 1877	701	215	12	123
Stove-hood	J. N. Todd	187,199	Feb. 6, 1877	260	85	11	238
Stove, Hydrocarbon	A. B. Hutchins	194,242	Aug. 14, 1877	471	143	12	304
Stove, Kerosene	F. Morandi	193,343	July 24, 1877	833	255	12	149
Stove, Lamp	G. H. Ferris	189,616	Apr. 17, 1877	622	192	11	656
Stove, Lamp	M. L. Hull	196,120	Oct. 16, 1877	464	135	12	642
Stove, Lamp	B. G. Lofstedt	194,921	Sept. 4, 1877	164	51	12	423
Stove-leg	W. Bourn	198,073	Dec. 11, 1877	365	113	12	1008
Stove-leg	P. Hauersperger	190,716	May 15, 1877	647	192	11	845
Stove-leg fastening	T. H. Roberts	196,705	Oct. 30, 1877	1070	311	12	746
Stove, Magazine cooking	J. D. Murray	192,783	July 3, 1877	224	65	12	43
Stove, Magazine heating	W. P. Brophy	192,484	June 26, 1877	1011	306	11	1138
Stove, Magazine heating and cooking	E. A. C. Fox	192,864	July 10, 1877	333	98	12	65
Stove-mat	C. A. Reimers and J. C. Brauch	190,901	May 15, 1877	810	240	11	867
Stove, Nursery gas and heating	S. Rothschild, jr	189,787	Apr. 17, 1877	795	244	11	678
Stove, Oil	O. Edwards	188,288	Mar. 13, 1877	328	103, 104	11	430
Stove, Oil	L. S. Enos	197,725	Dec. 4, 1877	18	6	12	949
Stove, Oil	H. P. Malone	189,048	Apr. 3, 1877	34	12	11	563
Stove, Oil	C. Ruprecht	193,619	July 31, 1877	1122	337	12	199
Stove, Oil	D. Shields	188,424	Mar. 13, 1877	465	145	11	449
Stove, Oil	D. C. Wilmot	187,574	Feb. 20, 1877	658	205	11	310
Stove, Oil and gas	O. Edwards	193,937	Aug. 7, 1877	138	42	12	253
Stove, Oil and gas	D. W. Goodell	190,308	May 1, 1877	193	57	11	771
Stove, Oil-burning	J. H. Shaut	190,084	Apr. 24, 1877	1123	341	11	729
Stove, Open-front heating	F. E. Thompson and D. Knappenberger.	193,198	July 17, 1877	656	200	12	118
Stove or lamp, Oil	E. Blackman	197,318	Nov. 20, 1877	621	183	12	866
Stove or range, Cooking	A. C. Williams	185,997	Jan. 2, 1877	182	56	11	32
Stove-panel fastening	G. S. Stannard	197,573	Nov. 27, 1877	896	267	12	915
Stove, Parlor	D. E. Paris	194,107	Aug. 14, 1877	341	102	12	286
Stove, Parlor	F. H. Root	198,215	Dec. 18, 1877	532	165	12	1038
Stove, Petroleum	O. Petsch and H. Shiebler	187,171	Feb. 6, 1877	238	78	11	235
Stove-pipe	A. B. Allen	186,290	Jan. 16, 1877	470	144	11	86
Stove-pipe	G. Buchanan	185,849	Jan. 2, 1877	35	11	11	13
Stove-pipe drum and shelf, Combined	J. P. Jaeger	187,534	Feb. 20, 1877	625	194	11	305
Stove-pipe elbow	G. Choate	193,847	Aug. 7, 1877	47	15	12	241
Stove-pipe, &c., elbow	A. C. Hogen	187,385	Feb. 13, 1877	466	146	11	277
Stove-pipe elbow	J. M. Lauby	193,970	Aug. 7, 1877	171	52	12	258
Stove-pipe-elbow machine	F. A. Gleason	186,004	Jan. 9, 1877	196	60	11	43
Stove-pipe-elbow machine	A. Syversen	195,674	Sept. 25, 1877	939	280	12	557
Stove-pipe, Extension	M. G. Graham	186,125	Jan. 9, 1877	311	95	11	58
Stove-pipe safe and register	H. B. Morrison	192,181	June 19, 1877	684	210	11	1084
Stove-pipe-safe thimble	A. F. Wright	190,401	May 1, 1877	289	85	11	784

Alphabetical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Stove-pipe shelf	H. Doolittle	197,347	Nov. 20, 1877	654	193	12	871
Stove-pipe shelf	W. L. Hess	187,274	Feb. 13, 1877	255	113	11	263
Stove-pipe shelf	J. W. Jackson	190,760	May 15, 1877	684	203	11	851
Stove-pipe thimble	J. Carhartt	191,567	June 5, 1877	55	16	11	984
Stove-pipe thimble	W. J. Donaldson	194,338	Aug. 21, 1877	583	175	12	326
Stove-pipe thimble	S. Selden, M. Griswold, jr., and O. R. Hanchett.	190,986	May 22, 1877	919	272	11	889
Stove-pipe thimble	T. Shuman	193,560	July 24, 1877	1045	313	12	177
Stove-pipe thimble	S. D. Vose and J. D. Pierce	198,168	Dec. 11, 1877	466	146	12	1022
Stove-pipe wall-thimble	C. Streit	189,071	Apr. 3, 1877	56	21	11	566
Stove-pipes and chimneys, Draft apparatus for	G. H. Russell	195,656	Sept. 25, 1877	924	275	12	555
Stove-plate	H. Miner	190,235	May 1, 1877	118	35	11	762
Stove-platform	C. E. L. Holmes	186,415	Jan. 23, 1877	685	210	11	125
Stove-platform	W. W. Wadsworth	197,233	Nov. 20, 1877	539	159	12	854
Stove-polish	L. C. Harvey	187,378	Feb. 13, 1877	460		11	276
Stove-polish	J. W. Hill	190,968	May 22, 1877	898		11	887
Stove-polish	D. W. Parker	187,897	Feb. 27, 1877	997		11	363
Stove-polish	E. L. Whiton	191,787	June 12, 1877	270		11	1018
Stove, Portable lamp	M. T. Richardson	192,011	June 12, 1877	493	151	11	1046
Stove, range, &c., grate	J. H. Mearns	192,777	July 3, 1877	220	63	12	42
Stove-reacher	W. Rutherford and P. Mitchell	192,879	July 10, 1877	349	102	12	67
Stove-refrigerator	W. F. Humphreys	186,933	Feb. 6, 1877	20	9	11	204
Stove-register	B. F. Clement	192,814	July 10, 1877	286	83	12	59
Stove, Reservoir cooking	G. Wellhouse and J. L. Taplin	186,026	Jan. 2, 1877	216	65,66	11	46
Stove, Safety car	S. and G. R. Swartz	189,668	Apr. 17, 1877	672	208	11	662
Stove, Self-feeding	G. Beddow	195,081	Sept. 11, 1877	339	103	12	455
Stove-shelf attachment	S. L. Yourtee	187,744	Feb. 27, 1877	845	263	11	343
Stove, Warming	R. E. C. Divver	196,883	Nov. 6, 1877	155	45	12	782
Stoves and ranges, Reservoir for	A. J. Redway	192,280	June 19, 1877	793	241	11	1098
Stoves, Attachment for oil or gas cook	O. F. Stedman	192,629	July 3, 1877	74	22	12	22
Stoves, Casing for car	H. Tanner	190,929	May 15, 1877	839	248	11	871
Stoves, Cooking attachment to coal-oil	N. H. Sherburne and E. S. Skinner.	191,553	June 5, 1877	44	13	11	982
Stoves, Culinary attachment to base-burning heating	J. Dwyer and G. H. Barbour	195,109	Sept. 11, 1877	368	110	12	459
Stoves, Floor-protector for	F. J. Seymour	186,063	Jan. 9, 1877	253	76	11	51
Stoves, furnaces, &c., Grate for	R. Simpson	190,091	Apr. 24, 1877	1132	344	11	730
Stoves, Grate-extension for	S. C. Call	192,227	June 19, 1877	736	224	11	1090
Stoves, Oven for gas	W. M. Jackson	187,013	Feb. 6, 1877	96	33	11	215
Stoves, Portable illuminated cover for	A. B. Summers	195,673	Sept. 25, 1877	938	280	12	557
Stoves, Vapor-conductor for cooking	C. H. Phelps	195,901	Oct. 9, 1877	220	62	12	000
Stoves, Water-heater for	J. J. Elwood	189,551	Apr. 17, 1877	555	173	11	647
Stoves, Zinc board for	E. Jones	189,470	Apr. 10, 1877	460	145	11	626
Straightening iron bars	S. W. Baldwin	187,957	Mar. 6, 1877	1	1	11	381
Strainer	A. Guillemin and J. Lehman	193,244	July 17, 1877	713	218	12	125
Strainer and alarm for coffee and tea pots	J. W. Garvin and C. C. Bowen	196,443	Oct. 23, 1877	791	228	12	697
Strainer-cup	J. W. Oberholtzer	187,550	Feb. 20, 1877	638	198	11	307
Strainer, Milk	H. T. Jones	194,354	Aug. 21, 1877	599	179	12	528
Strainer, Milk	J. A. Preston	188,539	Mar. 20, 1877	587	181	11	475
Strainer, steeper, and clarifier for tea, coffee, &c	H. C. Rice	193,894	Aug. 7, 1877	93	30	12	247
Strap: *See* Boot and gaiter strap. Harness breast-strap. Harness holdback-strap. Hose-strap. Leather strap. Shawl-strap.							
Strap-fastener	W. Hyre	190,493	May 8, 1877	397	116	11	806
Strap-lock	B. Kano	189,361	Apr. 10, 1877	357	115	11	613
Straw-cutter	J. E. Andrews	188,837	Mar. 27, 1877	899	273	11	525
Straw-cutter	E. B. Carr	188,308	Mar. 13, 1877	380	119	11	437
Straw-cutter	W. S. Gibson	188,791	Mar. 27, 1877	851	258	11	519
Straw-cutter	E. M. Hesselbom	190,758	May 15, 1877	682	202	11	850
Straw-cutter	W. Kachin	191,288	May 29, 1877	1223	367	11	939
Straw-cutter	G. H. Keller	192,172	June 19, 1877	676	207	11	1082
Straw-cutter	C. Larsen and R. Olsen	188,520	Mar. 20, 1877	572	176 and 177	11	472
Straw-cutter	T. E. Marable	191,008	May 22, 1877	941	278	11	892
Straw-cutter	D. Maxwell	186,261	Jan. 16, 1877	444	136 and 137	11	83
Straw-cutter	S. Mepham	192,927	July 10, 1877	389	116	12	73
Straw-cutter	C. Silberzahn and H. Hayssen	193,189	July 17, 1877	647	197	12	116
Straw-cutter	W. H. Sullenberger	193,900	Aug. 7, 1877	98	32	12	248
Straw-cutter	A. Vahldieck	191,625	June 5, 1877	107	33	11	991
Straw-cutter	L. Winslow	187,791	Feb. 27, 1877	892	278	11	349
Straw-stacker	W. Deetz	187,522	Feb. 20, 1877	616	191	11	304
Street-engines, Exhaust apparatus for	C. T. Parry	191,545	June 5, 1877	37	11	11	981
Street-guide	M. J. Vieria	193,302	July 17, 1877	775	237	12	131
Street-sprinkler	J. Hoffman	196,046	Oct. 9, 1877	338	96	12	617
Street-sweeper	N. Campbell	190,976	May 22, 1877	886	262	11	886
Street-sweeper	W. H. Gunnell	186,724	Jan. 30, 1877	922	286	11	167
Stretcher-frame	J. H. Wilt	192,319	June 19, 1877	843	255	11	1104
Striping-machine	C. Van Slyck and H. S. De Forest	195,058	Sept. 11, 1877	315	95	12	451
Stud and button	G Pitts	198,149	Dec. 11, 1877	445	139	12	1019
Stud and button	L. Towne	188,267	Mar. 13, 1877	308	98	11	428
Stud-fastening	M. Zacharias	191,394	May 29, 1877	1306	396	11	951
Stud or clasp for fastening gloves, &c	W. H. Douglas	196,200	Oct. 16, 1877	540	157	12	653
Student's chair	W. F. Taylor	187,680	Feb. 20, 1877	761	236	11	323
Stuffing-box	J. Lockhardt	195,829	Oct. 2, 1877	134	33	12	580
Stuffing-box for propeller-shafts	F. H. Lauten	198,030	Dec. 11, 1877	326	101	12	1002
Stump-burner	W. Armstrong, J. F. Smith, and J. F. Armstrong.	197,810	Dec. 4, 1877	104	32	12	961
Stump-elevator	A. Dunnebache and J. Linden	192,421	June 26, 1877	958	287	11	1131
Stump-extractor	C. Barlow	197,238	Nov. 20, 1877	544	161	12	854
Stump-extractor	W. Berry, jr	186,788	Jan. 30, 1877	988	307	11	176
Stump-extractor	W. Berry	195,438	Sept. 25, 1877	715	211	12	525

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Stump-extractor	G. H. Clark	188,340	Mar. 13, 1877	381	119	11	438
Stump-extractor	J. and W. H. H. Hollen	187,709	Feb. 27, 1877	811	252	11	338
Stump-extractor	A. McKenney	188,654	Mar. 20, 1877	697	214, 215	11	490
Stump-extractor	A. McKenney	188,655	Mar. 20, 1877	700	215	11	490
Stump-extractor	A. H. Miller	197,652	Nov. 27, 1877	979	291	12	927
Stump-extractor	G. Ortel	188,401	Mar. 13, 1877	447	133	11	447
Stump-extractor	C. Tener	194,626	Aug. 28, 1877	864	257	12	373
Stump-puller	H. M. Stitzer	195,544	Sept. 25, 1877	815	242	12	539
Submarine boat	C. F. Henis and C. F. Pike	191,760	June 12, 1877	242	76	11	1014
Submarine boats, Electro-magnetic steering apparatus for.	J. L. Lay	198,127	Dec. 11, 1877	425	132, 133	12	1016
Submarine torpedo-boats, Electro-magnetic steering apparatus for.	J. L. Lay	198,126	Dec. 11, 1877	424	132	12	1016
Sucker-rod	L. Rogers	191,180	May 22, 1877	1100	328	11	914
Sucker-rod adjuster	W. H. Curtis	196,564	Oct. 30, 1877	937	271	12	728
Sucker-rod connections, Machine for turning, drilling, and tapping.	A. D. Laws	191,979	June 12, 1877	460	142	11	1042
Sucker-rod coupling	S. J. Reno	188,187	Mar. 6, 1877	223	70	11	409
Sucker-rod coupling	W. S. Roberts	197,667	Nov. 27, 1877	989	295	12	929
Sucker-rod joint	J. Shaw	195,408	Sept. 18, 1877	674	199	12	511
Sucker-rod joints, Die for forming	G. Douglass	189,200	Apr. 3, 1877	164	57	11	581
Sucker-rod joints, Roll for the manufacture of	J. Cain	192,054	June 19, 1877	561	171	11	1068
Sugar, Apparatus for drying hard	W. R. Elmenhorst	186,816	Jan. 30, 1877	1012	314	11	179
Sugar boiling and evaporating pan	W. Clough	189,082	Apr. 3, 1877	63	23, 24	11	567
Sugar-cane, Apparatus for boiling	J. Bromley	192,483	June 26, 1877	1011	306	11	1138
Sugar, Clarifying	J. Schwartz	189,504	Apr. 10, 1877	491		11	630
Sugar-cubes, Machine for cutting	C. Raetz	192,527	June 26, 1877	1063	320	11	1144
Sugar in centrifugal machines, Apparatus for liquoring hard.	O. H. Krause	191,535	June 5, 1877	29	8	11	980
Sugar into cubes, Machinery for cutting and pressing	W. Jasper	194,244	Aug. 14, 1877	473	143	12	304
Sugar-liquor rising with the steam from vacuum-pans, Apparatus for collecting and saving particles of.	F. O. Matthiessen	191,163	May 22, 1877	1062	324	11	912
Sugar-liquor rising with the steam from vacuum-pans, Device for collecting and saving particles of.	A. A. Goubert	191,527	June 5, 1877	17	5	11	979
Sugar-liquor which boils over from vacuum-pans, Device for collecting the.	F. O. Matthiessen and A. A. Goubert.	191,538	June 5, 1877	32	9	11	980
Sugar machine, Cube	F. Westermann and O. Mursch	191,391	May 29, 1877	1303	395	11	951
Sugar machines, Cut-off slide for cube	L. Höpken	194,022	Aug. 14, 1877	312	92	12	283
Sugar, Manufacture of	L. E. Schmalz	192,531	June 26, 1877	1067	321	11	1145
Sugar, Manufacture of milk	L. H. Witte	193,436	July 24, 1877	919		12	161
Sugar, Manufacturing powdered white	W. R. Elmenhorst	195,591	Sept. 25, 1877	862		12	546
Sugar-purging apparatus, Automatic	C. Plagge	192,004	June 12, 1877	482	148	11	1045
Sugar rising with the steam from vacuum-pans, Device for collecting and saving the particles of.	F. O. Matthiessen and A. A. Goubert.	191,537	June 5, 1877	31	9	11	980
Sugar, Treating	J. Duncan and B. E. R. Nowlands	188,873	Mar. 27, 1877	934	284	11	530
Sugar, Washing raw	F. O. Matthiessen	191,539	June 5, 1877	33	9	11	980
Sulky, Trotting	W. J. Donley	195,588	Sept. 25, 1877	859	255	12	545
Sulky, Trotting	W. J. Donley	196,142	Oct. 16, 1877	486	141	12	645
Sulky, Trotting	D. G. Hetfield	188,013	Mar. 6, 1877	56	16	11	388
Sulky, Trotting	J. W. Wood	187,693	Feb. 20, 1877	770	239, 240	11	324
Sulphurous acid, Apparatus for manufacturing hydrated.	W. D. Jones	197,474	Nov. 27, 1877	792	237	12	901
Sulphurous anhydride, Manufacturing	R. P. Pictet	191,778	June 12, 1877	200	82	11	1017
Sun-dial	A. W. Anderson	196,550	Oct. 30, 1877	924	267	12	726
Supporter: *See* Abdominal supporter. Book-supporter. Boot-leg supporter. Brush and broom supporter. Carriage-top supporter. Corset skirt-supporter. Dress-train supporter. Eyeglass-supporter. Flower-pot supporter. Galley-supporter. Music-supporter. Napkin-supporter. Rein-supporter. Skirt-supporter. Spinning-frame-bobbin supporter. Stocking-supporter. Table-leaf supporter. Thill-supporter. Vehicle-top supporter.							
Suppository-mold	H. W. Comstock	188,594	Mar. 20, 1877	636	197	11	482
Surgeons' bandages, Fabric for	H. P. Plante	196,040	Oct. 9, 1877	363	104	12	620
Surgical apparatus for fracture of the clavicle	B. G. McCabe	195,941	Oct. 9, 1877	265	75	12	606
Surgical bandages, Apparatus for preparing	F. Green	196,892	Nov. 6, 1877	162	48	12	783
Surgical instrument, Veterinary	L. W. Hamilton	186,726	Jan. 30, 1877	924	287	11	167
Surgical tube, India-rubber	E. Pfarre	191,879	June 12, 1877	359	111	11	1029
Surveying-instruments, Tripod-head for	D. Hoffman	197,369	Nov. 20, 1877	674	201	12	875
Suspender-clasp	F. Eckermann	193,811	Aug. 7, 1877	14	5	12	236
Suspender-clasp	G. B. Gurley	187,269	Feb. 13, 1877	350	111	11	262
Suspender-end	J. H. Murfey	193,889	Aug. 7, 1877	89	29	12	247
Suspender-end clasp	G. H. Leonard	196,588	Oct. 30, 1877	959	278	12	731
Suspender-stay	G. Butterfield	190,738	May 15, 1877	665	197	11	848
Suspenders	J. Betts	188,572	Mar. 20, 1877	615	191	11	479
Suspenders	G. B. Gurley	193,651	July 31, 1877	1161	347	12	204
Suspenders	J. R. Pollock	189,494	Apr. 10, 1877	482	153	11	629
Suspenders	T. O. Potter	194,616	Aug. 28, 1877	857	255	12	372
Suspenders	L. V. Richmond	190,516	May 8, 1877	421	123	11	809
Suspenders	J. B. Sharp	192,535	June 26, 1877	1070	322	11	1145
Suspenders	A. Shenfield	189,394	Apr. 10, 1877	391	124	11	617
Suspenders	A. Shenfield	191,184	May 22, 1877	1103	329	11	915
Suspenders	A. Shenfield	191,185	May 22, 1877	1104	330	11	915
Suspenders	L. C. Warner	186,775	Jan. 30, 1877	972	302	11	174
Suspension hook and clasp	F. Anderson	188,037	Mar. 6, 1877	84	24	11	391

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Swing	F. H. Clark	197,603	Nov. 27, 1877	928	277	12	920
Swing	J. F. Eller	198,091	Dec. 11, 1877	385	121	12	1011
Swing	J. H. Fisher	198,013	Dec. 11, 1877	313	96	12	1000
Swing	C. Hartman and F. A. Freese	198,612	Dec. 25, 1877	934	284	12	1106
Swing	J. J. Janezeck	191,683	June 5, 1877	164	51	11	998
Swing	E. Schlueter	194,003	Aug. 7, 1877	293	61	12	262
Swing	E. K. Thomas	192,097	June 19, 1877	601	183	11	1073
Swing, Automatic	T. Connelly and J. F. Bickell	197,097	Nov. 13, 1877	388	114	12	823
Swinging gate	J. R. Brott	190,186	May 1, 1877	76	21	11	756
Swinging gate	H. B. Freeman	190,022	Apr. 24, 1877	1056	321	11	720
Swinging gate	W. A. Ohaver	189,644	Apr. 17, 1877	643	200	11	659
Swinging gate	L. G. Woolley	188,218	Mar. 6, 1877	254	79	11	413
Switch: *See* Hair-switch. Railway-switch.							
Switch-signaling apparatus	W. Buchanan	190,465	May 8, 1877	369	107	11	802
Switches, Locking	W. Buchanan	196,428	Oct. 23, 1877	776	224	12	695
Syringe	A. Berger	196,417	Oct. 23, 1877	766	222	12	694
Syringe	C. E. Griswold	193,368	July 24, 1877	858	262	12	152
Syringe	J. S. Parsons	191,775	June 12, 1877	256	81	11	1016
Syringe bottle, Hypodermic	E. Pfarre	195,947	Oct. 9, 1877	270	76	12	607
Syringe-case	B. F. Sutton	191,083	May 22, 1877	1008	300	11	902
Syringe, Hypodermic	J. McMorries	187,031	Feb. 6, 1877	111	37	11	217
Syringe-tube holder	M. Mattson	191,357	May 29, 1877	1277	385	11	947
Syringe, Vaginal	R. H. Woodward	195,868	Oct. 2, 1877	176	50	12	586
T.							
Table: *See* Adjustable table. Billiard-table. Engraving-machine table. Extension-table. Folding table. Game-table. Ironing-table. Kitchen-table. Plotting-table. Saw-table. Sewing-machine table. Toilet-table.							
Table	C. Kramer	197,147	Nov. 31, 1877	433	128	12	831
Table	W. S. Shurtleff	188,196	Mar. 6, 1877	234	73	11	411
Table-fork blank	L. S. White	192,801	July 3, 1877	246	72	12	45
Table-fork for green corn, &c	F. M. Dixon	187,363	Feb. 13, 1877	447	141	11	275
Table-leaf support	W. F. Daly	189,197	Apr. 3, 1877	162	56	11	581
Table-leaf support	G. E. Eberhart	197,022	Nov. 13, 1877	302	89	12	811
Table-leaf support	N. A. Hull	190,717	May 15, 1877	648	192	11	846
Table-leaf support	M. and V. Rathknecht	194,974	Sept. 11, 1877	227	70	12	439
Table-leaf support	C. H. Rohde	188,414	Mar. 13, 1877	457	142	11	448
Table-leaf support	H. Schier	186,171	Jan. 9, 1877	353	108	11	64
Table-leg support	N. A. Hull	196,093	Oct. 16, 1877	430	125	12	637
Table, sideboard, and safe, Combined	E. Rosenthal	188,415	Mar. 13, 1877	458	142	11	448
Tables and other articles, Device for packing	E. P. Wright	191,792	June 12, 1877	274	85	11	1018
Tablet holder, Erasive	O. Cleveland	193,795	July 31, 1877	1209	390	12	223
Tablet, Rolling pocket	H. T. Cushman	196,636	Oct. 30, 1877	1001	292	12	737
Tablet, Writing	B. Brower	194,410	Aug. 21, 1877	648	195	12	335
Tablet, Writing	G. M. Dimmock	194,137	Aug. 14, 1877	375	111	12	291
Tablet, Writing	H. Laurence	193,971	Aug. 7, 1877	172	53	12	258
Tablets, signs, &c., Manufacture of	H. Pfeil	191,174	May 22, 1877	1093		11	913
Tack-holding strip	G. W. Copeland and M. Brock	197,609	Nov. 27, 1877	937	278	12	921
Tack strip and reel	G. W. Copeland	186,663	Jan. 30, 1877	868	268	11	159
Tacking-machine	G. W. Copeland, E. Woodward, and M. Brock.	197,608	Nov. 27, 1877	935	278	12	921
Tackle-block	J. W. Norcross	189,773	Apr. 17, 1877	780	239, 240	11	676
Tackle-block	J. W. Norcross	189,774	Apr. 17, 1877	781	240	11	676
Tackle-block	J. Simpson and A. A. Pope	188,759	Mar. 27, 1877	808	247, 248	11	514
Tag	E. Culver	191,117	May 22, 1877	1040	311	11	906
Tag	E. F. Krelwitz	188,920	Mar. 27, 1877	976	299	11	536
Tag-fastener	T. P. Marston	187,027	Feb. 6, 1877	108	36	11	217
Tag-fastener	E. A. G. Roulstone	198,689	Dec. 25, 1877	1009	307	12	1116
Tag-fastener	W. R. Russell	197,293	Nov. 20, 1877	595	176	12	862
Tag-machine	H. D. Mentzel	190,506	May 8, 1877	411	120	11	808
Tag, Merchandise	O. T. Smith	192,947	July 10, 1877	409	122	12	77
Tailor's chalk-holder	E. S. Bartram	194,886	Sept. 4, 1877	127	39	12	418
Tallow-cup	D. Parmer	185,955	Jan. 2, 1877	145	44	11	27
Tally, bag-holder and weigher, Grain	A. C. Lintz	193,414	July 24, 1877	930	274	12	158
Tally, Grain	P. S. Wiseman	191,503	May 29, 1877	1432	431	11	965
Tamping-tool	L. W. Mead	191,164	May 22, 1877	1083	324	11	912
Tan-bark, &c., Machine for compressing	C. Kimplen	195,377	Sept. 18, 1877	643	190, 191	12	507
Tan-bark, Process and apparatus for leaching	J. J. Johnston	193,120	July 17, 1877	590	178	12	108
Tan-liquor for distillation for plumping hides, Utilizing sour.	H. J. Botchford	195,790	Oct. 2, 1877	94		12	575
Tank: *See* Metal-tank. Oil-tank.							
Tanner's apparatus for handling hides	C. Steinmann and J. Metzger	197,426	Nov. 20, 1877	730	218	12	883
Tannin, Apparatus for extracting	T. W. Johnson	187,468	Feb. 20, 1877	564	174, 175	11	297
Tanning	R. Hein	194,090	Aug. 14, 1877	311		12	283
Tanning	F. Knapp	193,520	July 24, 1877	1005		12	172
Tanning compound	F. Funke	196,081	Oct. 16, 1877	415		12	635
Tanning hides and skins, Chemical compound for	F. Knapp	193,521	July 24, 1877	1006		12	172
Tanning leather	I. Wells	198,477	Dec. 25, 1877	806		12	1087
Tanning leather, Extract for	I. Wells	198,478	Dec. 25, 1877	807		12	1087
Tanning solution	J. Foley	193,443	July 24, 1877	926		12	162
Tap and die	J. Flower	189,719	Apr. 17, 1877	723	222	11	669

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Tap and stopper for aerated liquid bottles, Combined siphon.	H. J. Cole	185,582	Jan. 2, 1877	38	12	11	13
Tap and stopper for aerated liquid bottles, Siphon.	H. J. Cole	185,853	Jan. 2, 1877	39	12	11	14
Tap-barrel	H. Sanders	187,179	Feb. 6, 1877	245	80	11	236
Tap-wrench	C. Elterich	192,423	June 26, 1877	959	288	11	1131
Tap-wrench, Adjustable	R. H. St. John	188,978	Mar. 27, 1877	1033	318	11	544
Tapping mains, Machine for	L. W. Wells	197,235	Nov. 20, 1877	541	160	12	854
Tape, Device for securing and protecting	W. H. Stafford and S. S. Cook	192,136	June 19, 1877	640	195	11	1078
Tape, &c., from spools, Device for preventing the unrolling of.	A. C. Gould	191,581	June 5, 1877	66	20	11	985
Target, Flying	E. M. Leavitt	193,879	Aug. 7, 1877	73	24	12	245
Target for shooting-galleries	D. W. Hoshall	191,345	May 29, 1877	1267	382	11	946
Target for shooting-galleries	W. H. H. Norcross	189,321	Apr. 10, 1877	322	101	11	608
Target for testing penetration of shot	J. P. O'Neil	197,398	Nov. 20, 1877	701	210	12	879
Target, Glass-ball	W. Butterworth	195,569	Sept. 25, 1877	538	249	12	543
Target, Glass-ball	I. A. Paine	196,379	Oct. 23, 1877	738	212	12	689
Target sheet	J. P. O'Neil	197,397	Nov. 20, 1877	700	210	12	879
Target, Spherical glass	A. H. Bogardus	189,422	Apr. 10, 1877	417	131	11	621
Tax-reckoner	G. E. Burnett	194,646	Aug. 28, 1877	881	263	12	376
Tea and coffee pot	R. A. Gardner	190,135	May 1, 1877	21	6	11	749
Tea and coffee pot	J. Hall	194,518	Aug. 28, 1877	773	229	12	360
Tea and coffee pot	E. B. Manning	189,762	Apr. 17, 1877	771	236	11	674
Tea and coffee pot	M. Simons	192,196	June 19, 1877	702	215	11	1086
Tea and coffee pot handle	A. Bayley	190,807	May 15, 1877	721	214	11	856
Tea-caddy	L. W. Hemp and S. Knight	190,584	May 8, 1877	482	144	11	817
Tea-kettle	J. Reinig	189,497	Apr. 10, 1877	485	153	11	630
Tea-kettle	L. A. White and G. W. Lewin	187,690	Feb. 20, 1877	768	238	11	324
Tea-kettles, &c., Manufacture of	A. J. Lowell	187,651	Feb. 20, 1877	737	228	11	320
Tea-pot	J. E. Jeffords	193,708	July 31, 1877	1211	363	12	211
Tea-pot	E. Oliver	187,893	Feb. 27, 1877	994	307	11	362
Tea-pot	N. Plympton	198,312	Dec. 18, 1877	631	192	12	1053
Tea-steeping device	G. W. Woodward and J. E. Jeffords.	186,656	Jan. 23, 1877	854	264	11	148
Teaching arithmetic, Apparatus for	R. W. Kavanaugh	196,583	Oct. 30, 1877	954	276	12	730
Teaching, Chart for object	S. J. Lackey	197,279	Nov. 20, 1877	582	172, 173	12	860
Teaching musical transposition, Device for	J. C. Simonton	197,497	Nov. 27, 1877	818	244	12	904
Teaching penmanship, Device for	J. D. Taylor	188,984	Mar. 27, 1877	1038	319	11	545
Teaching spelling, Apparatus for	D. A. Willbanks	189,535	Apr. 10, 1877	523	164	11	635
Teeth, Artificial	F. T. Mercer	188,254	Mar. 13, 1877	297	93	11	426
Teeth, Plate for artificial	B. St. John	196,397	Oct. 23, 1877	752	217	12	691
Telegraph, Acoustic electric	T. A. Edison	186,330	Jan. 16, 1877	525	159	11	92
Telegraph apparatus, Electro-magnetic	R. K. Boyle	186,453	Jan. 23, 1877	666	204	11	123
Telegraph, Automatic	T. A. Edison	195,751	Oct. 2, 1877	60	18	12	569
Telegraph, Automatic	T. A. Edison	195,752	Oct. 2, 1877	61	18	12	570
Telegraph, Automatic electric	R. K. Boyle	186,104	Jan. 9, 1877	290	87	11	55
Telegraph bell-striker, Fire-alarm	W. Donaldson	186,545	Jan. 23, 1877	748	229, 230	11	134
Telegraph bell-striker, Fire-alarm	C. H. Pond	188,183	Mar. 6, 1877	219	68, 69	11	409
Telegraph, Chemical	C. A. Randall	191,176	May 22, 1877	1095	327	11	914
Telegraph, Copying	L. Pickering	191,464	May 29, 1877	1380	416	11	960
Telegraph coupling, Railway-train	E. J. and F. W. McRavey, and J. Scwartz.	188,163	Mar. 6, 1877	197	60	11	406
Telegraph, Dial	R. J. Sheehy	189,272	Apr. 3, 1877	239	79, 80	11	590
Telegraph, Dial	J. H. C. Watts	186,283	Jan. 16, 1877	462	142	11	85
Telegraph, District and fire-alarm	J. H. Guest	193,650	July 31, 1877	1158	346, 347	12	203
Telegraph, Duplex	C. H. Rudd	191,887	June 12, 1877	367	113	11	1030
Telegraph, Electro-harmonic	E. Gray	186,340	Jan. 16, 1877	534	162	11	94
Telegraph instrument, Autographic	W. E. Sawyer	196,832	Nov. 6, 1877	93	29	12	774
Telegraph line, Underground	W. Mackintosh	186,355	Jan. 16, 1877	551	167	11	95
Telegraph line, Underground	W. Mackintosh	186,356	Jan. 16, 1877	552	168	11	96
Telegraph message process, Copying	W. E. Sawyer	195,238	Sept. 18, 1877	516	151	12	488
Telegraph, Multiple	G. Smith	189,276	Apr. 3, 1877	244	82	11	591
Telegraph, Printing	G. M. Phelps	196,476	Oct. 23, 1877	827	239	12	701
Telegraph, Printing	R. J. Sheehy	191,479	May 29, 1877	1396	421, 422	11	962
Telegraph, Printing	E. P. Warner	190,456	May 8, 1877	360	104, 105	11	801
Telegraph, Quadruplex	F. W. Jones	191,439	May 29, 1877	1351	409, 410	11	957
Telegraph, Quadruplex	F. W. Jones	191,440	May 29, 1877	1354	410	11	957
Telegraph, Quadruplex	H. C. Nicholson	196,248	Oct. 16, 1877	590	171	12	660
Telegraph, Quadruplex	G. B. Prescott	190,898	May 15, 1877	807	239	11	867
Telegraph, Quadruplex	B. Thompson	195,055	Sept. 11, 1877	311	95	12	450
Telegraph, Quadruplex	B. Thompson	196,057	Oct. 9, 1877	380	108	12	623
Telegraph-regulator, Automatic	W. E. Sawyer	195,235	Sept. 18, 1877	512	150	12	488
Telegraph relay, Electric	G. Allan and J. W. Brown	198,482	Dec. 25, 1877	812	246	12	1088
Telegraph repeater, Fire-alarm	C. H. Pond	188,179	Mar. 6, 1877	212	65, 66, 67	11	408
Telegraph repeater, Fire-alarm	C. H. Pond	188,181	Mar. 6, 1877	217	68	11	409
Telegraph signal-box, District	S. D. Field	189,717	Apr. 17, 1877	720	221, 222	11	668
Telegraph signal-box, District	L. B. Firman	192,644	July 3, 1877	94	27	12	25
Telegraph signal-box, Fire-alarm	A. C. and A. H. Palmer	197,400	Nov. 20, 1877	703	211	12	879
Telegraph signal-box, Fire-alarm	C. H. Pond	188,180	Mar. 6, 1877	215	67	11	408
Telegraph signal-box, Fire-alarm	C. H. Pond	188,182	Mar. 6, 1877	218	68	11	409
Telegraph-sounder	J. H. Bunnell and M. W. Goodyear	190,191	May 1, 1877	80	22	11	157
Telegraph-sounder	D. E. Sweet	195,417	Sept. 18, 1877	681	202	12	513
Telegraph system, Metrical	T. M. Foote	191,130	May 22, 1877	1051	315	11	908
Telegraph, Telephonic	T. A. Edison	198,087	Dec. 11, 1877	380	120	12	1010
Telegraph, Telephonic	T. A. Edison	198,088	Dec. 11, 1877	382	120	12	1010
Telegraph, Telephonic or electro-harmonic	T. A. Edison	198,089	Dec. 11, 1877	383	120	12	1011

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Telegraph-transfer process, Autographic	W. E. Sawyer	195,237	Sept. 18, 1877	515	150	12	488
Telegraph-transmitter, Autographic	W. E. Sawyer	195,236	Sept. 18, 1877	514	150	12	488
Telegraph transmitter, Printing	G. M. Phelps	186,215	Jan. 16, 1877	405	124	11	78
Telegraph-wire, Compound	W. E. Rice	187,175	Feb. 6, 1877	241	79	11	235
Telegraph-wires, Instrument for cleaning	J. Walsh	197,067	Nov. 13, 1877	348	103	12	818
Telegraphs, Local circuit-breaker for electro-harmonic.	E. Gray	194,671	Aug. 28, 1877	905	270	12	379
Telegraphs, Magneto-electric transmitter for printing.	G. M. Phelps	195,162	Sept. 11, 1877	422	125	12	467
Telegraphs, Perforating apparatus for electric	C. A. Randall	193,672	July 31, 1877	1181	353	12	206
Telegraphs, Receiver for electro-harmonic	E. Gray	198,379	Dec. 18, 1877	698	212	12	1062
Telegraphic alarm and signal apparatus	T. A. Edison	186,548	Jan. 23, 1877	752	230, 231	11	134
Telegraphic circuit	S. J. M. Bear	192,856	July 10, 1877	327	96	12	64
Telegraphy, Automatic	J. W. Brown	189,184	Apr. 3, 1877	146	52	11	579
Telegraphy, Device for effecting the static discharge in autographic.	W. E. Sawyer	196,833	Nov. 6, 1877	95	30	12	774
Telegraphy, Electric	A. G. Bell	186,787	Jan. 30, 1877	985	306, 307	11	175
Telegraphy, Morse telephonic system of	E. Gray	198,378	Dec. 18, 1877	697	212	12	1062
Telephone or speaking telegraph	J. J. McTighe	197,387	Nov. 20, 1877	690	207	12	877
Telephone or speaking telegraph	J. J. McTighe	198,406	Dec. 18, 1877	724	219	12	1066
Telescope	A. Moser	189,950	Apr. 24, 1877	972	298	11	710
Telescopes, Objective for astronomical	E. Gundlach	193,816	Aug. 7, 1877	20	7	12	237
Telescopic or hydraulic elevator	W. R. Comings	191,516	June 5, 1877	6	2	11	977
Tellurian	F. Howes	192,369	June 26, 1877	909	273	11	1125
Tellurian	G. McBride	198,647	Dec. 25, 1877	971	296	12	4111
Temple roller-drilling machine	W. W. Dutcher	197,210	Nov. 20, 1877	515	152	12	850
Temporary binder	I. Reynolds	193,057	July 10, 1877	494	148	12	88
Ten-pin ball	W. Woods	189,674	Apr. 17, 1877	678	209	11	663
Tenon and mortise joint	W. F. Morton	189,770	Apr. 17, 1877	777	238	11	675
Tenon and mortise joint for joinery, Dovetail	R. B. Cantrell	187,962	Mar. 6, 1877	5	2	11	381
Tenoning and mortising machine	F. Arbey	186,703	Jan. 30, 1877	905	280	11	165
Tenoning-machine	L. Houston	187,138	Feb. 6, 1877	210	68	11	231
Tenoning-machine	S. M. Redfield	197,797	Dec. 4, 1877	93	28	12	959
Tent	J. C. French	198,599	Dec. 25, 1877	917	280	12	1104
Test-gage	O. D. Thayer	186,770	Jan. 30, 1877	967	300	11	173
Testing-machine	R. Cerero	194,129	Aug. 14, 1877	369	109	12	290
Testing-machine, Hydraulic	W. C. Allison	194,857	Sept. 4, 1877	101	32	12	414
Textile and other materials, Machine for cutting	A. Warth	188,702	Mar. 20, 1877	743	228	11	496
Textile fabrics, Ornamenting	R. Le Ronx	190,501	May 8, 1877	406	118	11	807
Theater and method of protecting same from fire	L. Sues	188,315	Mar. 13, 1877	358	112	11	434
Thermometer	F. A. Stohlmann	191,897	June 12, 1877	377	116	11	1031
Thermostat, Electric	E. J. Frost	186,553	Jan. 23, 1877	757	232	11	135
Thief and robber trap	W. E. Wharton	193,790	July 31, 1877	1294	388	12	222
Thief-detecter for money-drawers, &c	G. Palmer	194,308	Aug. 21, 1877	551	166	12	322
Thill and pole, Carriage	A. Moffitt	191,459	May 29, 1877	1375	415	11	960
Thill attachment, Adjustable	S. Gilzinger	193,505	July 24, 1877	986	298	12	170
Thill, Center-draft side	C. H. Matthiessen	188,927	Mar. 27, 1877	983	301	11	537
Thill-coupling	J. W. Anderson	196,177	Oct. 16, 1877	518	150	12	650
Thill-coupling	F. G. Arter	192,404	June 26, 1877	945	283	11	1129
Thill-coupling	C. A. Ball	195,077	Sept. 11, 1877	335	102	12	454
Thill-coupling	P. E. Bird	188,096	Mar. 6, 1877	128	38	11	398
Thill-coupling	W. H. Brace	198,074	Dec. 11, 1877	366	114	12	1009
Thill-coupling	J. Carr	194,219	Aug. 14, 1877	447	136	12	301
Thill-coupling	D. W. Copeland	197,101	Nov. 13, 1877	392	115	12	824
Thill-coupling	J. L. and W. E. Crist and G. H. Smith.	188,042	Mar. 6, 1877	88	25	11	392
Thill-coupling	T. B. Farrell and M. D. Borst	188,613	Mar. 20, 1877	652	202	11	484
Thill-coupling	A. Gaudy and H. W. Wilson	193,863	Aug. 7, 1877	62	19	12	243
Thill-coupling	J. C. Gould	198,376	Dec. 18, 1877	694	212	12	1062
Thill-coupling	H. D. Haisten	194,673	Aug. 28, 1877	908	271	12	380
Thill-coupling	J. F. Hill	188,363	Mar. 13, 1877	406	126	11	441
Thill-coupling	C. C. Hinkley	191,285	May 29, 1877	1220	366	11	939
Thill-coupling	T. J. Hubbell	189,225	Apr. 3, 1877	190	65	11	584
Thill coupling	W. Johnston	197,221	Nov 20, 1877	527	155	12	852
Thill-coupling	F. E. Justice	194,687	Aug. 28, 1877	923	274	12	381
Thill-coupling	J. Kitzmiller	191,599	June 5, 1877	83	25	11	987
Thill-coupling	A. P. Ladd	193,664	July 31, 1877	1173	351	12	205
Thill-coupling	R. C. Millings	193,536	July 24, 1877	1020	307	12	174
Thill-coupling	H. G. Morgan	195,524	Sept. 25, 1877	800	237	12	537
Thill-coupling	B. P. Morrison	188,933	Mar. 27, 1877	988	303	11	538
Thill-coupling	W. B. Owen and E. J. McClintock	188,663	Mar. 20, 1877	707	217	11	491
Thill-coupling	C. E. Pickering	198,041	Dec. 11, 1877	337	104	12	1004
Thill-coupling	J. T. Pomeroy	192,186	June 19, 1877	690	212	11	1084
Thill-coupling	C. B. Post	192,187	June 19, 1877	691	212	11	1084
Thill-coupling	F. C. Potter	195,230	Sept. 18, 1877	505	148	12	487
Thill-coupling	O. O. Roberts	187,484	Feb. 20, 1877	581	180	11	299
Thill-coupling	N. A. Seymour and O. Allen	197,180	Nov. 13, 1877	466	138	12	835
Thill-coupling	D. R. Silver	196,601	Oct. 30, 1877	970	281	12	733
Thill-coupling	L. C. Spencer and P. Barrett	195,961	Oct. 9, 1877	284	80	12	609
Thill-coupling	E. G. Stanley	187,192	Feb. 6, 1877	255	83	11	237
Thill-coupling	J. Wade	185,845	Jan. 2, 1877	31	10	11	12
Thill-coupling	J. W. Wallace	197,066	Nov. 13, 1877	347	103	12	818
Thill-coupling	J. E. Walton	198,325	Dec. 18, 1877	642	196	12	1054
Thill-coupling	F. F. Wheeler	188,272	Mar. 13, 1877	314	99	11	428
Thill-coupling	J. A. Whipple	194,020	Aug. 7, 1877	224	66	12	264
Thill-couplings, Anti-rattling spring for	H. Beard	196,554	Oct. 30, 1877	928	268	12	726
Thill loop or supporter	T. Eaton, jr	190,963	May 22, 1877	894	264	11	886
Thill-support	A. E. Teal and C. E. Nelson	190,727	May 15, 1877	657	194	11	847
Thills, Attaching sleigh	W. Fairweather	186,668	Jan. 30, 1877	872	269	11	160
Thills, Supporting	W. Smith	188,200	Mar. 6, 1877	238	75	11	411
Thimble	W. Durand	188,110	Mar. 6, 1877	141	42	11	399

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Thimble, Sewing	N. T. and T. Porter	190,897	May 15, 1877	806	238	11	867
Thrasher, Pea-nut	J. L. Underwood	194,195	Aug. 14, 1877	427	129	12	298
Thrashing and hulling machine, Clover	J. C. Birdsell	197,084	Nov. 13, 1877	371	109, 110	12	821
Thrashing and hulling machine, Clover	Z. S. Stocking and D. Lippy	193,786	July 31, 1877	1289	387	12	222
Thrashing-machine	J. Brown	198,187	Dec. 18, 1877	504	156	12	1034
Thrashing-machine	W. Carr	197,719	Dec. 4, 1877	10	4	12	948
Thrashing-machine	W. Crotzer	198,355	Dec. 18, 1877	672	205	12	1058
Thrashing-machine	W. W. Dingee	195,586	Sept. 25, 1877	857	254, 255	12	545
Thrashing-machine	R. Durand	191,280	May 29, 1877	1214	365	11	938
Thrashing-machine	J. H. Elward	187,607	Feb. 20, 1877	690	214, 215	11	314
Thrashing-machine	J. P. and J. W. Gordon	193,866	Aug. 7, 1877	63	20	12	243
Thrashing-machine	J. and H. Kolling	194,919	Sept. 4, 1877	159	50	12	422
Thrashing-machine	H. and E. Kurtz	192,268	June 19, 1877	781	238	11	1096
Thrashing-machine	G. W. Tate	197,909	Dec. 4, 1877	203	61	12	975
Thrashing-machine feeder	E. J. Clanton	193,319	July 24, 1877	810	249	12	146
Thrashing-machine feeder	E. J. Marsters	191,985	June 12, 1877	466	143	11	1043
Thrashing-machine side gear	J. Kramer and B. Boke	193,819	Aug. 7, 1877	23	8	12	237
Thrashing-machine teeth, Die for the manufacture of	J. W. Waterman	185,880	Jan. 2, 1877	64	20	11	17
Thrashing-machines, Band-cutting feeder for	J. K. Burk	196,287	Oct. 23, 1877	642	186	12	675
Thrashing-machines, Band-cutting feeder for	J. Dusch and H. Lewis	191,339	Aug. 21, 1877	584	175	12	326
Thrashing-machines, Band-cutting feeder for	I. H. Green	191,335	May 29, 1877	1259	380	11	945
Thrashing-machines, Band-cutting feeder for	J. M. O'Neall	197,659	Nov. 27, 1877	983	293	12	928
Thrashing-machines, Blast-regulator for	W. Boren	190,812	May 15, 1877	726	215	11	857
Thrashing-machines, Concave for	J. H. Sharp	189,507	Apr. 10, 1877	494	156	11	631
Thread-cabinet	B. F. Saurman	187,487	Feb. 20, 1877	584	180	11	299
Thread-cutter	T. Masac	189,763	Apr. 17, 1877	772	237	11	675
Thread-cutting attachment	A. Coats	188,284	Mar. 13, 1877	326	102	11	430
Thread, &c., Making	A. R. Arnold	193,207	July 17, 1877	664	203, 204	12	119
Thread, Manufacture of waxed	D. U. Jennings	198,392	Dec. 18, 1877	709	215	12	1064
Thread-stretchers, Stop-motion for	J. N. Leonard	197,519	Nov. 27, 1877	841	251	12	907
Thread winding and stretching machine, Silk	J. S. Macfarlane	187,653	Feb. 20, 1877	739	228	11	320
Ticket-book	P. Deusner, jr	187,221	Feb. 13, 1877	303	99	11	255
Ticket-case	H. W. Conger	193,640	July 31, 1877	1147	343	12	202
Ticket-case	S. W. Lloyd and W. L. Coakley	190,502	May 8, 1877	407	119	11	807
Ticket-case	S. Strandgaard	186,381	Jan. 16, 1877	583	178	11	99
Ticket-case	F. R. Wolfinger	187,793	Feb. 27, 1877	895	278	11	349
Ticket-clasp	J. W. Lyon	195,623	Sept. 25, 1877	890	264	12	550
Ticket-envelope	J. H. Culver	194,076	Aug. 14, 1877	294	88	12	281
Ticket-holder	E. D. Pinney and A. L. Hodge	193,382	July 24, 1877	869	266	12	154
Ticket, Railway	E. G. Johnson	191,435	May 29, 1877	1347	408	11	956
Ticket, Railway	B. C. Pole	186,613	Jan. 23, 1877	812	251, 252	11	143
Ticket-reel	W. W. Bierce	189,991	Apr. 24, 1877	1010	309	11	715
Ticket-reel	W. N. Evans	189,552	Apr. 17, 1877	557	173	11	648
Tide-power	H. Newhouse	189,643	Apr. 17, 1877	643	200	11	659
Tide-wheel	W. H. Andrews and H. Fuller	193,909	Aug. 7, 1877	107	34	12	249
Tie: *See* Bale-tie. Railway-tie. Cotton-tie. Railway cross-tie.							
Tile-machine	H. B. Camp	197,718	Dec. 4, 1877	9	3	12	947
Tile-machine	G. S. Clark and W. M. Purcell	191,313	May 29, 1877	1241	373	11	942
Tile-machine	B. P. Perry	192,128	June 19, 1877	632	192, 193	11	1077
Tile-laying implement	W. L. Tyner	195,186	Sept. 11, 1877	448	133	12	471
Tile-laying machine	W. J. and J. I. Mettler	193,019	July 10, 1877	474	143	12	85
Tile-laying machine	J. H. Sparkes	195,775	Oct. 2, 1877	79	24	12	572
Till-alarm	H. W. Morgan	195,631	Sept. 25, 1877	897	266, 267	12	551
Till-check	B. F. Kelly	197,377	Nov. 20, 1877	681	204	12	876
Till-lock alarm	A. Rosenfield	193,779	July 31, 1877	1278	384	12	221
Till or money-drawer	A. T. Crippen	194,415	Aug. 21, 1877	654	197	12	335
Tilting chair	D. C. Meeker	198,655	Dec. 25, 1877	979	298	12	1112
Tilting chair	J. White	193,433	July 24, 1877	917	279	12	161
Tilting chair	H G. E. Wolff	197,195	Nov. 13, 1877	482	140	12	838
Tilting-gate	I Brokaw	187,253	Feb. 13, 1877	336	107	11	260
Timber, Apparatus for butting and dressing	W. H. Knight	189,864	Apr. 24, 1877	889	272	11	699
Time attachment for locks	J. Sargent	186,369	Jan. 16, 1877	564	172	11	97
Time-detecter, Watchman's	W. Imhaeuser	192,334	June 26, 1877	875	261	11	1120
Time-detecter, Watchman's	W. W. Le Grand	196,913	Nov. 6, 1877	186	54	12	786
Time-detecter, Watchman's	J. H. Marvil	190,058	Apr. 24, 1877	1096	334	11	725
Time-detecter, Watchman's	A. J. Redier	189,785	Apr. 17, 1877	792	243	11	677
Time-detecter, Watchman's	G. W. Shingleton	194,006	Aug. 7, 1877	209	62	12	252
Time-lock	J. Burge	194,506	Aug. 21, 1877	748	223	12	348
Time-lock	M. A. Dalton	194,656	Aug. 28, 1877	889	265, 266	12	378
Time-lock	M. A. Dalton	194,896	Sept. 4, 1877	135	42, 43	12	419
Time-lock	L. A. Haines	188,623	Mar. 20, 1877	661	204	11	485
Time-lock	L. Lillie	193,973	Aug. 7, 1877	173	53	12	258
Time-lock	J. B. Overmyer and J. A. Huston	193,544	July 24, 1877	1028	309	12	175
Time-lock	J. Sargent	198,157	Dec. 11, 1877	455	142	12	1020
Time-lock	E. Stockwell	185,983	Jan. 2, 1877	167	51, 52	11	30
Time-lock	E. Stockwell	186,177	Jan. 9, 1877	359	110	11	61
Time-lock	H. R. Towne and E. Stockwell	194,273	Aug. 14, 1877	502	152	12	308
Time-lock	E. J. Woolley	186,221	Jan. 16, 1877	411	126	11	79
Time-lock	E. J. Woolley	198,721	Dec. 25, 1877	1039	316	12	1121
Time-lock, combination-lock, and bolt-work for safes, &c., Combined	J. Sargent	195,539	Sept. 25, 1877	810	240	12	539
Time-lock, Electro-magnetic	C. E. Chinnock	197,826	Dec. 4, 1877	119	37	12	963
Time-locks, Electro-magnetic attachment for	W. W. Sherar	187,055	Feb. 6, 1877	131	43	11	220
Time-movements to distant dials. Transmitting	H. J. Wenzel	196,404	Oct. 23, 1877	758	218	12	692

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Tin can	J. C. Howard	186,840	Jan. 30, 1877	1044	322	11	183
Tin foil, Manufacture of	J. J. Crooke	195,490	Sept. 25, 1877	766		12	532
Tin, Manufacture of oxide of	J. M. Sanders	196,831	Nov. 6, 1877	32	29	12	774
Tin scrap, Utilizing	C. A. Catlin and G. F. Wilson	190,550	May 8, 1877	451	133	11	813
Tinner's machine-stand	W. Dale	197,108	Nov. 13, 1877	398	117	12	825
Tinner's scrap, Making cast metal from	J. M. Sanders	191,780	June 12, 1877	263		11	1017
Tinning apparatus	J. B. Jones	195,510	Sept. 25, 1877	788	233	12	535
Tinsmith's shears	T. H. Brady	193,217	July 17, 1877	681	207	12	120
Tire-adjuster	G. Tryon	198,258	Dec. 18, 1877	591	179	12	1046
Tire bending and upsetting attachment for punching and shearing machines.	A. W. Comstock	196,877	Nov. 6, 1877	148	44	12	781
Tire bending, upsetting, and cutting machine	L. W. Tyler	191,201	May 22, 1877	1119	335	11	917
Tire, Elastic wheel	F. Mulliner	193,988	Aug. 7, 1877	189	57	12	260
Tire heater	W. E. Stewart	192,198	June 19, 1877	703	216	11	1086
Tire-heating device	C. O. Gause	186,721	Jan. 30, 1877	920	285	11	167
Tire-tightener	O. F. A. Faulkner	190,300	May 1, 1877	185	55	11	770
Tire-tightener	T. A. Frakes	187,838	Feb. 27, 1877	942	293	11	356
Tire-tightener	C. H. Jacobs	190,331	May 1, 1877	215	64	11	774
Tire-tightener	C. Z. Lindley	197,224	Nov. 20, 1877	529	156	12	852
Tire-tightener	J. Martin	197,647	Nov. 27, 1877	074	290	12	927
Tire-tightener	M. Osborn	187,552	Feb. 20, 1877	639	199	11	307
Tire-tightener	W. F. Rowe	189,788	Apr. 17, 1877	796	245	11	678
Tire-tightener	A. G. Shepard	197,058	Nov. 13, 1877	341	101	12	817
Tire-tightener	F. T. Stone	190,166	May 1, 1877	60	16	11	754
Tire-tightener	S. Stout	194,742	Aug. 28, 1877	978	290	12	380
Tire-tightener and lifting-jack	A. W. Comstock and J. W. Hampton.	188,595	Mar. 20, 1877	637	197	11	482
Tire tightener, Wagon	W. G. McCreight	194,161	Aug. 14, 1877	399	119	12	294
Tire-upsetter	J. G. Melo	196,923	Nov. 6, 1877	196	57	12	767
Tire, Vehicle-wheel	G. Cornwall	197,102	Nov. 13, 1877	393	115	12	824
Tire, Wheel	I. N. Pyle	189,386	Apr. 10, 1877	377	122	11	616
Tires, Mold for casting wheel	N. Washburn	197,753	Dec. 4, 1877	48	15	12	953
Toaster and broiler	S. Poole	195,306	Sept. 18, 1877	581	169	12	497
Toaster and broiler	J. E. Wickham	187,769	Feb. 27, 1877	891	277	11	349
Tobacco and cabbage planter	J. C. Tennent	193,734	July 31, 1877	1232	370	12	214
Tobacco and cigars, Label for plug	G. W. Yerby	192,726	July 3, 1877	169	48	12	36
Tobacco and cotton press	A. Talbott	188,693	Mar. 20, 1877	735	225	11	495
Tobacco and other articles, Press for compressing	W. H. Malone	186,049	Jan. 9, 1877	241	72	11	49
Tobacco, Apparatus for curing	A. Feun	186,669	Jan. 30, 1877	873	270	11	160
Tobacco-bag	W. J. Cusson	194,655	Aug. 28, 1877	888	265	12	377
Tobacco-box	L. T. Brewer	197,760	Dec. 4, 1877	58	19	12	954
Tobacco-caddy	L. M. Fitzhugh	190,568	May 8, 1877	469	139	11	815
Tobacco-cutter	J. Farrar	191,126	May 22, 1877	1048	314	11	907
Tobacco-cutter	C. F. Harlow	192,579	July 3, 1877	24	7	12	15
Tobacco-cutter	S. H. Loring	196,366	Oct. 23, 1877	724	208	12	687
Tobacco-cutter	B. Moon	188,397	Mar. 13, 1877	443	137	11	446
Tobacco-cutter gage	M. B. Morris	195,722	Oct. 2, 1877	34	10	12	565
Tobacco, Device for attaching labels to plug	C. W. Van Alstine	192,885	July 10, 1877	354	104	12	68
Tobacco, Device for drying and conditioning leaf	R. Dunlop	196,746	Nov. 6, 1877	9	3	12	762
Tobacco, Distributing liquids through	J. Smith and C. R. Messinger	187,924	Feb. 27, 1877	1027		11	366
Tobacco-drying apparatus	C. Losee	191,450	May 29, 1877	1368	413	11	958
Tobacco-grinding apparatus	S. V. Appleby	195,073	Sept. 11, 1877	330	100	12	453
Tobacco-hanger	J. G. Hester	188,631	Mar. 20, 1877	672	207	11	486
Tobacco-harvester	H. Janes	194,601	Aug. 28, 1877	843	251	12	371
Tobacco, Labeling plug	L. Lottier, jr	196,237	Oct. 16, 1877	580	167	12	658
Tobacco, Labeling plug	R. Wilson, P. J. Sorg, and J. Auer.	194,064	Aug. 14, 1877	284	85	12	280
Tobacco-leaves, Apparatus for coloring	E. J. Oppelt	195,386	Sept. 18, 1877	652	193	12	508
Tobacco-leaves, Treating	J. Kimmel and J. Schmidgruber.	194,247	Aug. 14, 1877	477		12	305
Tobacco machine, Plug	T. W. Prather	186,496	Jan. 23, 1877	700	215	11	127
Tobacco-making machine, Plug	J. L. Jones	196,460	Oct. 23, 1877	807	233	12	699
Tobacco manufacture	D. C. Lyall	191,870	June 12, 1877	351	108	11	1028
Tobacco, Manufacture of plug	D. W. De Forest	197,722	Dec. 4, 1877	15	5	12	948
Tobacco, Manufacturing plug	G. S. Myers	195,151	Sept. 11, 1877	411	122	12	466
Tobacco, Marking plug	J. T. Drummond	189,711	Apr. 17, 1877	713	220	11	668
Tobacco, Marking plug	G. S. Myers	189,951	Apr. 24, 1877	974	298	11	710
Tobacco, Marking plug	G. B. Okell	195,688	Sept. 25, 1877	952	284	12	559
Tobacco, Marking plug	C. Peper	189,572	Apr. 17, 1877	579	179	11	650
Tobacco, Marking plug	E. C. Venable	188,991	Mar. 27, 1877	1045	321	11	546
Tobacco-package	P. Canhapé	189,604	Apr. 17, 1877	610	189	11	654
Tobacco-package	A. Villaret	194,197	Aug. 14, 1877	429	130	12	298
Tobacco-packing machine	J. R. Lawrence	193,666	July 31, 1877	1175	352	12	206
Tobacco-pail	A. Alford	198,178	Dec. 18, 1877	493	153	12	1033
Tobacco-pail cover	F. A. Braymer	189,299	Apr. 10, 1877	296	94	11	605
Tobacco-pipe	J. Davis	189,023	Apr. 3, 1877	13	5	11	560
Tobacco-pipe	S. R. Dummer	193,696	July 31, 1877	1202	360	12	209
Tobacco-pipe	W. H. Fisher and H. U. Kistner	198,285	Dec. 18, 1877	612	186	12	1049
Tobacco-pipe	H. D. Haraden	190,321	May 1, 1877	204	61	11	773
Tobacco-pipe	N. P. Oberg	191,544	June 5, 1877	36	11	11	981
Tobacco-pipe	S. H. Thurston	191,385	May 29, 1877	1299	393	11	950
Tobacco-pipe cover	G. Havell	188,627	Mar. 20, 1877	664	205	11	486
Tobacco-pipes, Machine for molding clay	J. G. Oliver	199,977	May 22, 1877	908	269	11	888
Tobacco-plant planter	R. A. Knox	191,601	June 5, 1877	84	25	11	988
Tobacco-plants, Instrument for suckering	R. B. Jameson	197,857	Dec. 4, 1877	149	45	12	967
Tobacco, Plug	E. R. Hearn	193,510	July 24, 1877	991	300	12	171
Tobacco, Plug	J. L. Jones	198,117	Dec. 11, 1877	412		12	1015
Tobacco-pouch	C. A. and N. T. Spence	196,546	Oct. 30, 1877	920	266	12	726
Tobacco, Preparing plug	G. B. Okell	194,949	Sept. 4, 1877	193	59	12	426
Tobacco-press	N. B. Jones	186,577	Jan. 23, 1877	777	240	11	138
Tobacco-press	B. Moon	188,169	Mar. 6, 1877	202	62	11	407
Tobacco, Printing or embossing plug	D. W. De Forest	191,841	June 12, 1877	326	101	11	1025
Tobacco-safe	J. W. Maynard	185,831	Jan. 2, 1877	18	6	11	11
Tobacco-safe	L. C. Parker	187,668	Feb. 20, 1877	751	233	11	322

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Tobacco-safe	L. C. Parker	192,712	July 3, 1877	159	45	12	34
Tobacco-spraying apparatus	J. Smith and C. R. Messinger	187,187	Feb. 6, 1877	250	82	11	236
Tobacco-stem flattener	N. H. Borgfeldt	189,296	Apr. 10, 1877	294	93	11	605
Tobacco-stick	M. M. Ledford	189,756	Apr. 17, 1877	765	235	11	674
Tobacco stripping and drying machine	W. Davies	194,134	Aug. 14, 1877	373	111	12	290
Tobacco-transplanter	J. W. Beverly	188,847	Mar. 27, 1877	908	276	11	527
Tobacco, Treating leaf	C. F. Ljick	195,878	Oct. 9, 1877	194	55	12	597
Tobacconist's gage	R. H. Edmunds, jr	197,839	Dec. 4, 1877	133	40	12	964
Toe calks, Machine for making	H. C. Field	189,349	Apr. 10, 1877	345	111	11	611
Toe-weight attachment	Q. M. Youngs	192,105	June 19, 1877	607	185	11	1074
Toilet articles, Receptacle for	J. Vernon	193,058	July 10, 1877	515	155	12	90
Toilet-case	C. Carroll and F. B. Lee	196,629	Oct. 30, 1877	995	290	12	737
Toilet-case	G. H. Crain	190,287	May 1, 1877	174	52	11	768
Toilet-case	W. A. Nichols	196,034	Oct. 9, 1877	358	102	12	819
Toilet-mask	N. S. Emerson-French	194,815	Sept. 4, 1877	60	20	12	409
Toilet-screen, Folding	E. S. Lathrop	192,701	July 3, 1877	151	42	12	33
Toilet table and stand, Combined	P. Ryan	186,020	Jan. 9, 1877	211	64	11	45
Toilet washing-powder	R. Sommers	188,549	Mar. 20, 1877	596		11	476
Tombstones, Covering for monumental	E. F. Towers	198,712	Dec. 25, 1877	1031	313	12	1119
Tombstones, &c., Device for depositing and covering pictures in.	J. D. McClain	196,919	Nov. 6, 1877	191	55	12	787
Tongs and cutter, Pipe	A. Ochsner	197,658	Nov. 27, 1877	982	293	12	928
Tongs and wrench, Pipe	E. B. O'Kelly	194,716	Aug. 28, 1877	948	282	12	385
Tongs, Blacksmith's	J. H. Gregory	190,487	May 8, 1877	392	114	11	805
Tongs, Blacksmith's	J. Van Matre	191,734	June 5, 1877	209	66	11	1005
Tongs, Lifting	J. T. Campbell	190,194	May 1, 1877	82	23	11	157
Tongs or wrench, Pipe	E. R. Girvin	189,621	Apr. 17, 1877	626	194	11	656
Tongs, Pipe	A. E. Gay	187,265	Feb. 13, 1877	347	110	11	261
Tongs, Pipe	A. H. Jarecki	190,330	May 1, 1877	214	64	11	774
Tongs, Pipe	S. N. Jossop	186,575	Jan. 23, 1877	775	239	11	138
Tongs, Pipe	W. Lomas	194,254	Aug. 14, 1877	482	145	12	306
Tongs, Pipe	C. States and H. I. Cook	190,523	May 8, 1877	425	124	11	810
Tongs, Pipe	W. A. St. John, W. M. Robinson, and J. Shepard.	187,928	Feb. 27, 1877	1030	317	11	367
Tongs, Pipe-welding	J. Fieldhouse	188,881	Mar. 27, 1877	941	287	11	531
Tongs, Stove	C. M. Morrison	187,039	Feb. 6, 1877	118	39	11	218
Tongs, Table	J. Huffman and J. Funkhouser	197,372	Nov. 20, 1877	677	202	12	875
Tongue and double-tree, Wagon	A. Hawkens and G. H. Wetzel	196,091	Oct. 16, 1877	428	124	12	637
Tongue-cleaner	L. Morganthau	194,364	Aug. 21, 1877	606	182	12	329
Tongue, Sled	J. P. Lawson	186,484	Jan. 23, 1877	692	212	11	126
Tongue support, Wagon	R. Dudley	189,344	Apr. 10, 1877	340	109	11	611
Tongue support, Wagon	J. M. Hunter	196,805	Nov. 6, 1877	68	20	12	770
Tongue, Wagon	A. J. Clemmons	194,222	Aug. 14, 1877	449	137	12	301
Tongue, Wagon	G. N. Tures	195,057	Sept. 11, 1877	314	95	12	451
Tonsorial compound	W. Clark	192,565	July 3, 1877	9		12	14
Tool	A. Knight	193,697	Aug. 7, 1877	168	52	12	257
Tool, Combination	I. U. Malphurs	186,259	Jan. 16, 1877	443	136	11	83
Tool, Combination	J. L. Williams	190,397	May 1, 1877	286	84	11	783
Tool-handle	J. H. Anthony	195,739	Oct. 2, 1877	50	15	12	567
Tool-handle	C. Groth	191,757	June 12, 1877	240	76	11	1014
Tool-handle	J. L. Hudson	192,261	June 19, 1877	777	236	11	1095
Tool-handle	L. Landeker	191,866	June 12, 1877	348	107	11	1027
Tool-handle	E. H. Roberts	191,073	May 22, 1877	999	297	11	901
Tool-handle	E. H. Sears	192,086	June 19, 1877	592	180	11	1072
Tool-handle wedge	A. S. West	194,391	Aug. 21, 1877	628	189	12	332
Tool-handles, Attaching	T. H. Neal	195,152	Sept. 11, 1877	412	122	12	466
Tool-handles, Securing	L. Landeker	194,358	Aug. 21, 1877	603	180	12	328
Tool-holder	G. Collins	187,660	Feb. 20, 1877	684	213	11	313
Tool-holder	J. W. Olmsted and B. R. Ketcham	196,125	Oct. 16, 1877	470	136	12	643
Tool-holder	T. Strowbridge	189,282	Apr. 3, 1877	256	85	11	592
Tools to sharpeners, Device for applying edge	C. P. Brown	193,784	July 31, 1877	1243	374	12	216
Tooth-pick	H. Laurence	194,447	Aug. 21, 1877	691	206	12	340
Tooth-pick	J. S. Smith	195,664	Sept. 25, 1877	930	277	12	556
Tooth-pick holder	J. Poznanski	186,952	Feb. 6, 1877	38	14	11	207
Tooth-picks, Machine for making	J. K. Duryee	187,223	Feb. 13, 1877	305	99	11	256
Tooth-picks, Machine for making	W. F. Swathel	197,150	Dec. 11, 1877	249	77	12	990
Top, Flying	E. Mets	191,246	May 29, 1877	1181	355	11	934
Top, Gyroscope	H. Beesley	188,095	Mar. 6, 1877	127	38	11	398
Top, Spinning	C. A. Bailey	195,326	Sept. 18, 1877	596	175	12	500
Top, Spinning	A. J. Davis	190,421	May 8, 1877	323	95	11	797
Top, Spinning	H. D. Forbes	191,756	June 12, 1877	239	76	11	1014
Top, Spinning	T. McLaughlin	191,701	June 5, 1877	179	56	11	1060
Top, Spinning	J. W. Murphy	197,393	Nov. 20, 1877	696	209	12	878
Top, Spinning	E. W. Packer	188,174	Mar. 6, 1877	206	64	11	407
Torch	B. F. Card	193,596	July 31, 1877	1098	329	12	196
Torch	J. A. McPherson	187,232	Feb. 13, 1877	315	102	11	257
Torch for lighting gas, Portable percussion	W. W. Batchelder	192,964	July 10, 1877	425	127	12	79
Torch, Gas	A. R. Weiss	187,072	Feb. 6, 1877	146	48	11	222
Torch, Gas-lighting	E. L. Megill	193,535	July 24, 1877	1018	306	12	174
Torch, Gas-lighting	E. L. Megill	197,523	Nov. 27, 1877	847	253	12	909
Torpedo-guard	J. H. Fisher	197,262	Nov. 20, 1877	566	167	12	858
Torpedo, Oil-well	F. E. Hinman and F. L. Seely	196,977	Nov. 13, 1877	257	76	12	805
Torpedo, Oil-well	C. A. McCoy	196,815	Nov. 6, 1877	78	24	12	772
Torpedo, Oil-well	D. C. McIntire	195,147	Sept. 11, 1877	404	121	12	464
Torpedo, Oil-well	A. M. Smith	194,621	Aug. 28, 1877	861	256	12	373
Torpedo, Oil-well	E. E. Swett	196,999	Nov. 13, 1877	280	83	12	808
Tortoise-shell handle	C. W. Schaefer	191,615	June 5, 1877	96	30	11	989
Towel-rack	C. A. Brickley	191,564	June 5, 1877	53	16	11	983
Towel-rack	S. T. Kanuse	188,918	Mar. 27, 1877	975	298	11	536
Towel-rack	W. H. Merritt and F. A. Eckenfels.	191,989	June 12, 1877	469	144	11	1043
Towel-rack and wall-protector, Combined	E. Pullan	189,260	Apr. 3, 1877	228	76	11	589
Towing canal-boats	B. R. Cole and S. B. King	193,597	July 31, 1877	1098	329	12	196
Toy	A. Fritz	186,418	Jan. 23, 1877	631	192	11	118

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Toy	E. P. Hasbrouck	197,127	Nov. 13, 1877	416	122	12	828
Toy	G. H. Ireland	195,011	Sept. 11, 1877	267	82	12	444
Toy, Aerostat	W. S. Hull	190,591	May 8, 1877	489	146	11	818
Toy, Arithmetical	L. Weiser	189,979	Apr. 24, 1877	1062	307	11	714
Toy, Automatic	W. Baxter, jr	188,841	Mar. 27, 1877	901	274	11	526
Toy, Automatic	J. Schwippl	196,046	Oct. 9, 1877	369	105	12	621
Toy, Automatic	J. Schwippl	196,391	Oct. 23, 1877	748	215	12	691
Toy balloon	J. J. Detwiller	193,599	July 31, 1877	1101	330	12	196
Toy, Bell	E. C. Barton	186,705	Jan. 30, 1877	907	280	11	165
Toy bird	C. Robinson	196,704	Oct. 30, 1877	1069	310	12	746
Toy, Blowing	T. S. Seabury	197,569	Nov. 27, 1877	894	266	12	915
Toy boot-black	A. Gartner	192,689	July 3, 1877	142	39	12	32
Toy building-block	H. M. Quackenbush	195,689	Sept. 25, 1877	952	285	12	559
Toy buzz	J. Lauth	197,479	Nov. 27, 1877	799	238	12	902
Toy buzz	D. T. Snelbaker	196,713	Oct. 30, 1877	1079	313	12	748
Toy, Buzz	S. A. Standiford	195,776	Oct. 2, 1877	80	24	12	572
Toy buzz	J. B. Wells	193,201	July 17, 1877	659	201	12	118
Toy cannon	C. M. Crandall	187,104	Feb. 6, 1877	180	59	11	227
Toy cap-exploder	W. G. Fischer	190,481	May 8, 1877	386	112	11	804
Toy card-shooter	C. W. Frost	186,334	Jan. 16, 1877	529	160	11	93
Toy, Chromatrope	H. Van Altena	194,628	Aug. 28, 1877	865	258	12	374
Toy cigar-case	F. Waldschmitt	190,528	May 8, 1877	429	126	11	810
Toy clock	E. W. Bridge	194,645	Aug. 28, 1877	881	263	12	376
Toy dancer	B. F. Spayd	189,808	Apr. 17, 1877	812	250	11	680
Toy, Educational	E. S. Fisher	188,505	Mar. 20, 1877	558	172	11	470
Toy frog	E. Durand	188,875	Mar. 27, 1877	936	285	11	531
Toy gun	J. B. Tyler	186,964	Feb. 6, 1877	51	17	11	208
Toy horse and carriage	A. Q. Ross	186,880	Jan. 30, 1877	1083	335	11	188
Toy, Jumping	G. Boeringer	188,461	Mar. 20, 1877	516	159	11	465
Toy locomotive	W. S. Reed	193,460	July 24, 1877	943	286	12	164
Toy money-box	J. Blanc	196,966	Nov. 13, 1877	246	74	12	803
Toy money-box	J. H. Bowen	196,870	Nov. 6, 1877	141	42	12	780
Toy money-box	W. Bruce	190,704	May 15, 1877	631	187	11	844
Toy money-box	S. Clark	197,250	Nov. 20, 1877	555	164	12	856
Toy money-box	J. Hall	189,857	Apr. 24, 1877	884	270	11	698
Toy money-box	L. C. Hoffmeister	188,635	Mar. 20, 1877	676	208	11	487
Toy money-box	E. J. McLoughlin	191,065	May 22, 1877	992	295	11	900
Toy money-box	F. W. Smith	189,907	Apr. 24, 1877	935	285	11	704
Toy money-box	G. Zuckschwerdt	195,430	Sept. 18, 1877	497	206	12	514
Toy, Musical	C. W. Banks	188,839	Mar. 27, 1877	900	274	11	526
Toy, Musical	T. Nicholson	195,937	Sept. 11, 1877	293	89	12	448
Toy Noah's ark	G. H. Ireland	193,001	July 10, 1877	457	138	12	83
Toy pistol	C. A. Bailey	191,094	May 22, 1877	1016	303	11	903
Toy pistol	J. Barry	192,890	July 10, 1877	358	105	12	69
Toy pistol	R. W. Churchill	190,825	May 15, 1877	739	219	11	858
Toy pistol	B. Kirkbride	194,690	Aug. 28, 1877	925	275	12	382
Toy portrait-gallery	D. C. Fabronius	198,589	Dec. 25, 1877	906	277	12	1102
Toy puzzle-block	F. P. Schmitthenner	187,420	Feb. 13, 1877	500	155	11	281
Toy, Sectional	L. Schmetzer	187,322	Feb. 13, 1877	407	128	11	270
Toy ship	G. Taylor	188,983	Mar. 27, 1877	1038	319	11	545
Toy skating-rink	S. E. Bachmann	191,092	May 22, 1877	1015	302	11	903
Toy, Sounding	C. Arpisella	194,119	Aug. 14, 1877	358	106	12	188
Toy, Spinning	J. H. Jenkins	190,438	May 8, 1877	341	100	11	799
Toy target	C. Oakford	194,614	Aug. 28, 1877	855	255	12	372
Toy theater, Sectional	J. W. Scott	198,050	Dec. 11, 1877	344	107	12	1005
Toy trumpet	F. McLaughlin	196,595	Jan. 23, 1877	797	246	11	141
Toy, Trundle	C. C. King	195,136	Sept. 11, 1877	393	118	11	463
Toy, Trundle	H. P. Pflum	190,978	May 22, 1877	910	269	11	888
Toy velocipede	J. E. Conklin	191,278	May 29, 1877	1212	364	11	938
Toy wagon	H. Thomass	190,795	May 15, 1877	712	211	11	855
Toy watch	L. L. Grandperret	195,434	Sept. 18, 1877	699	207	12	515
Toy watch	J. G. Powell	190,362	May 1, 1877	242	72	11	778
Toy whirligig	J. Henninger	195,365	Sept. 18, 1877	630	187	12	505
Toy whirligig	C. E. Steller	187,062	Feb. 6, 1877	138	46	11	221
Toy whirligig	C. E. Steller	196,838	Nov. 6, 1877	100	31	12	775
Toy, Whirling	J. H. Jenkins	186,255	Jan. 16, 1877	439	135	11	82
Toy work-bench and tool-chest, Combined	A. Erlebach	198,092	Dec. 11, 1877	386	121	12	1011
Trace-carrier	C. B. Bristol	186,983	Feb. 6, 1877	73	24	11	211
Trace-carrier	W. E. Dippert	197,724	Dec. 4, 1877	17	5	12	949
Trace-carrier	L. E. Walker	195,909	Oct. 9, 1877	228	65	12	691
Trace carrier, Harness	J. L. Scholl	195,847	Oct. 2, 1877	155	44	12	583
Trace-detaching device	G. A. Beaver and E. O. Abbott	187,084	Feb. 6, 1877	160	53	11	224
Trace-fastener	C. S. Crittenden	190,473	May 8, 1877	379	110	11	803
Trace-fastener	J. G. Munroe	197,654	Nov. 27, 1877	980	292	12	927
Trace-fastener	H. H. Schroeder	192,458	June 26, 1877	990	298	11	1135
Trace-fastener	N. Thomas	194,568	Aug. 28, 1877	816	243	12	366
Trace-fastening	F. W. Beckwith	197,815	Dec. 4, 1877	108	33	12	961
Trace-fastening	B. F. Jones	188,146	Mar. 6, 1877	178	54	11	404
Trace, Harness	F. M. Collier and C. Thomas	194,991	Sept. 11, 1877	245	74	12	441
Trace-holder	W. K. Hardenbrook	198,295	Dec. 18, 1877	620	188	12	1051
Trace-holder	J. Hartman, jr	197,361	Nov. 20, 1877	666	199	12	874
Track cleaner, Car	J. N. Clark	189,696	Apr. 17, 1877	700	215	11	666
Track-clearer	W. Halsted	196,294	Oct. 23, 1877	651	188 189	12	677
Track-clearer	M. Poole	188,178	Mar. 6, 1877	211	65	11	408
Track-clearer for street-cars	L. Wood	195,738	Oct. 2, 1877	49	15	12	567
Track clearer, Railway	A. Day	190,563	May 8, 1877	462	137	11	814
Track-lifter and spike-puller, Combined	J. S. Kirkwood	196,811	Nov. 6, 1877	74	23	12	771
Traction-engine	J. S. Lake	186,582	Jan. 23, 1877	785	242	11	139
Traction-engine	L. Walker	193,737	July 31, 1877	1235	370	12	215
Traction-wheel	W. G. Cark	194,956	Sept. 11, 1877	211	66	12	437
Traction-wheel	E. J. A. de Bernales	185,856	Jan. 2, 1877	41	13	11	14
Traction-wheel	W. H. Trenwith	196,843	Nov. 6, 1877	106	32	12	776

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Traction-wheel	R. H. Yale	193,680	July 31, 1877	1188	356	12	207
Traction-wheel	B. Yoeb	196,280	Oct. 16, 1877	626	180	12	664
Train-brake, Automatic	H. L. Perrine	193,279	July 17, 1877	750	230	12	129
Train-signal, Electric	L. L. Ferris	186,467	Jan. 23, 1877	678	208	11	124
Train signal, Freight	C. E. Marsh	197,876	Dec. 4, 1877	169	51	12	970
Tramways, elevators, &c., Guide-roller for wire-rope	S. Haigh	196,085	Oct. 16, 1877	420	122	12	636
Tramways, Griping device for rope	T. H. Day	192,904	July 10, 1877	368	109	12	70
Transom-lifter	F. A. Reiher	186,166	Jan. 9, 1877	348	106	11	63
Transom-lifter	F. A. Reiher	188,947	Mar. 27, 1877	1003	308	11	540
Trausom-lifter	J. F. Wollensak	196,851	Nov. 6, 1877	116	35	12	777
Transom-opener	J. F. Wollensak	190,176	May 1, 1877	66	18	11	755
Transom-opener	J. F. Wollensak	194,205	Aug. 14, 1877	435	132	12	259
Transplanter and fertilizer	J. H. Nolan and B. Fitzpatrick	191,364	May 29, 1877	1282	387	11	948
Trap:							
See Animal-trap.	Potato-bug trap.						
Backwater-trap.	Plumber's trap.						
Ball-trap.	Sewer-trap.						
Fish-trap.	Sewer-gas trap.						
Fishing-trap.	Sink-trap.						
Fluid-trap.	Steam-trap.						
Fly-trap.	Stench-trap.						
Furnace dust-trap.	Thief and robber trap.						
Hog-trap.	Vermin-trap.						
Insect-trap.	Waste-pipe trap.						
Moth-trap.							
Trap for preventing the inflow of backwater	W. F. Downey	187,364	Feb. 13, 1877	448	141	11	275
Traveling-bag	S. R. Raffel	191,175	May 22, 1877	1094	327	11	913
Traveling-bag fastening	J. H. White	185,995	Jan. 2, 1877	181	56	11	32
Traveling-bag frame	H. Simpson	187,562	Feb. 20, 1877	647	201	11	308
Traveling-bag handle	J. W. Lieb	194,555	Aug. 28, 1877	805	239	12	365
Traveling-bag lock and handle, Combined	W. Roemer	195,233	Sept. 18, 1877	510	149	12	487
Traveling-bag safety attachment	H. Collins	189,083	Apr. 3, 1877	64	24	11	568
Traveling-bag, satchel, &c	A. C. Krick	193,523	July 24, 1877	1007	303	12	173
Traveling-bag, satchel, &c	W. Roemer	185,870	Jan. 2, 1877	54	17	11	16
Traveling-bag, satchel, &c., handle	J. W. Lieb	194,556	Aug. 28, 1877	806	240	12	365
Treadle	W. B. Floyd	189,093	Apr. 3, 1877	72	26	11	569
Treadle	C. Hopkins	186,564	Jan. 23, 1877	765	236	11	136
Treadle	H. Shogreu	196,770	Nov. 6, 1877	33	10	12	765
Treadle	G. H. Truxell	192,311	June 19, 1877	833	253	11	1102
Treadle-motion	H. B. and C. J. Barber	195,472	Sept. 25, 1877	751	221	12	530
Treadle movement	N. D. Brnhl	189,926	Apr. 24, 1877	953	291	11	707
Treadle mecbanism for operating machinery	W. A. Harp	192,257	June 19, 1877	773	235	11	1095
Treadles, &c, Attaching foot	A. Hitchcock	188,739	Mar. 27, 1877	789	242	11	511
Tree:							
See Sadle-tree.	Sink and sewer tree.						
Single-tree.	Whiffletree.						
Tree and post hole digger	W. H. Rhodes	192,282	June 19, 1877	795	242	11	1098
Tree-protector	A. E. Martin	187,979	Mar. 6, 1877	23	6	11	383
Tree-protector	A. S. Smith	198,701	Dec. 25, 1877	1021	311	12	1118
Tree-shield, Self-adjusting	A. Roff	187,317	Feb. 13, 1877	402	127	11	269
Trees, device for protecting and irrigating fruit	J. A. Headington	197,363	Nov. 20, 1877	667		12	874
Tricycle	M. E. Croft	194,416	Aug. 21, 1877	656	197	12	336
Trimmer:							
See Billiard-cue trimmer.	Hedge-trimmer.						
Boot and shoe edge trimmer.	Welt-trimmer.						
Trimming	M. P. Bray	186,454	Jan. 23, 1877	667	204	11	123
Triturating-machine	M. Golding	195,120	Sept. 11, 1877	379	114	12	461
Trough:							
See Eave-trough.	Feed-trough.						
Truck and bag-holder, Combined	D. S. Wing	191,502	May 29, 1877	1431	431	11	965
Truck and skid, Combined	T. Loring	193,374	July 24, 1877	863	264	12	153
Truck and track, Safety railway	J. W. Eckman	194,899	Sept. 4. 1877	141	44	12	420
Truck, Barrel	E. E. Blinu	191,222	May 29, 1877	1161	348	11	931
Truck, Brick-yard	E. Remillard	189,058	Apr. 3, 1877	45	16	11	565
Truck, Car	G. Crompton	193,439	July 24, 1877	922	280 281	12	162
Truck caster, &c., Wheel	G. P. Clark	192,055	June 19, 1877	562	171	11	1068
Truck for moving buildings	W. Bushee	196,289	Oct. 23, 1877	644	187	12	676
Truck for moving buildings	H. C. Hulet and J. D. Murphy	191,966	June 12, 1877	448	139	11	1040
Truck, Garbage	J. O. A. Bennett	189,015	Apr. 3, 1877	6	2	11	559
Truck, Hand	E. L. Byron	197,328	Nov. 20, 1877	636	187	12	868
Truck, Hand	H. R. Ferris	186,237	Jan. 16, 1877	424	130	11	89
Truck, Hand	H. R. Ferris	190,020	Apr. 24, 1877	1051	320	11	720
Truck, Hand	H. R. Ferris	193,401	July 24, 1877	887	271	12	156
Truck, Hand	C. H. Jackson	194,968	Sept. 11, 1877	221	69	12	438
Truck-irons for railway-cars, Machine for bending	J. T. Wilson	195,737	Oct. 2, 1877	48	15	12	567
Truck, Locomotive	W. Mason	197,946	Dec. 11, 1877	240	74	12	989
Truck, Railway	J. Cleminson	196,138	Oct. 16, 1877	482	140	12	644
Truck, Safety car	D. E. Dutrow	188,611	Mar. 20, 1877	650	201	11	484
Truck, Transformable stove	B. Slemmons	198,523	Dec. 25, 1877	851	259	12	1093
Truck, Warehouse	W. B. Grable and C. K. Pickles	194,236	Aug. 14, 1877	466	141	12	303
Trucks and locomotives, Griping and propelling attachment for car.	J. J. Thomas and W. J. Anderfuren.	189,152	Apr. 3, 1877	122	43	11	575
Trumpet for railway-heads and drawing-frames	P. C. Dawson	190,422	May 8, 1877	324	95	11	797
Trunk	J. De Quindre	195,807	Oct. 2, 1877	111	33	12	577
Trunk	C. F. Weston	195,680	Sept. 25, 1877	945	282	12	558
Trunk-catch	J. Arnold	197,074	Nov. 13, 1877	359	106	12	819
Trunk-catch	E. Rice	188,950	Mar. 27, 1877	1007	309	11	540
Trunk-catch	H. Vogler	192,355	June 26, 1877	897	269	11	1123
Trunk-corner clamps, Machine for making	W. B. Gould and N. Feick	187,267	Feb. 13, 1877	348	111	11	262
Trunk-fastener	P. Martin	196,030	Oct. 9, 1877	355	101	12	619
Trunk-fastener	F. W. Mix	186,746	Jan. 30, 1877	942	292	11	170
Trunk-fastening	A. Frankel	195,117	Sept. 11, 1877	376	113	12	460

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Trunk-fixture	C. A. Taylor	196,500	Oct. 23, 1877	854	245, 246	12	705
Trunk-hinge	J. Arnold	193,208	July 17, 1877	672	205	12	119
Trunk, portmanteau, &c	H. F. Worthington	189,410	Apr. 10, 1877	405	128	11	649
Trunk-roller	J. J. Cowell	186,990	Feb. 6, 1877	77	26	11	212
Trunks, Combined corner-clamp, guard, and bolt for	A. V. Romadka	185,971	Jan. 2, 1877	158	48	11	29
Truss	J. R. Alexander	192,141	June 19, 1877	645	197	11	1078
Truss	J. H. Corwin	197,104	Nov. 13, 1877	394	116	12	825
Truss	E. Edel	198,586	Dec. 25, 1877	904	276	12	1102
Truss	N. Jones	197,639	Nov. 27, 1877	966	288	12	925
Truss	R. R. Jones	197,142	Nov. 13, 1877	430	127	12	830
Truss	J. McShary	197,386	Nov. 20, 1877	689	206	12	877
Truss	B. T. Nichols	197,050	Nov. 13, 1877	334	98	12	816
Truss	E. H. Ryno	186,760	Jan. 30, 1877	956	297	11	172
Truss	J. A. Sherman	188,307	Mar. 13, 1877	348	109	11	433
Truss	J. W. Sutton	187,428	Feb. 13, 1877	508	157	11	282
Truss	L. Westinghouse	196,959	Nov. 6, 1877	227	68	12	792
Truss, Elastic	G. A. Tyer and W. J. Horne	196,272	Oct. 16, 1877	618	178	12	663
Truss, Hernia	J. C. Ward	197,506	Nov. 27, 1877	830	248	12	906
Tub: *See* Bath-tub. Electrical-bath tub.							
Tub	A. J. Johnson	192,121	June 19, 1877	627	191	11	1076
Tub, pail, cask, &c	H. W. Farley and M. C. Richards	190,299	May 1, 1877	184	55	11	770
Tube: *See* Dredging-tube. Steam-boiler tube. Metal tube. Surgical tube. Sheet-metal tube. Water-tube. Smoking-tube. Well-tube.							
Tube for holding cosmetics	J. L. Petingale	198,210	Dec. 18, 1877	526	162	12	1037
Tube-machine	M. Young	196,853	Nov. 6, 1877	117	35, 36	12	777
Tubes, Roll for reducing	W. McKenzie	191,875	June 12, 1877	357	110	11	1028
Tubing	G. Matheson	198,035	Dec. 11, 1877	331	102	12	1003
Tubing, Anchor and hydraulic support for well	M. Wanner and J. Youkers	189,288	Apr. 3, 1877	260	86	11	592
Tubing, Armor for flexible	H. Wakeman	188,554	Mar. 20, 1877	599	185	11	476
Tubing-clamp	M. Mattson	191,356	May 29, 1877	1277	385	11	947
Tubing, Coupling for oil-well	J. C Dickey	192,619	July 3, 1877	66	19	12	21
Tubing, Flexible	H. Wakeman	188,446	Mar. 13, 1877	491	152	11	453
Tubing from falling, Device for preventing oil-well	L. Patterson	193,278	July 17, 1877	749	229	12	129
Tubing, Machine for lining	H. Meyer	198,547	Dec. 25, 1877	871	265	12	1096
Tubing, Metallic	J. B. Root	188,305	Mar. 13, 1877	346	109	11	432
Tubing, Union and joint for	G. Matheson	191,768	June 12, 1877	251	79	11	1015
Tuck-marker	F. Henry	197,130	Nov. 13, 1877	418	123	12	828
Tucker	E. A. Vance	196,845	Nov. 6, 1877	108	33	12	776
Tug and pad-loop for harness, Combined	H. R. Woodcock	192,476	June 26, 1877	1003	303	11	1137
Tug attachment, Hame	J. A. Criswell	193,927	Aug. 7, 1877	124	39	12	252
Tug-carrier	G. Jeakle	186,478	Jan. 23, 1877	687	211	11	126
Tug, Harness	C. Hauff	191,051	May 22, 1877	980	291	11	898
Tug lining, Shaft	E. C. Bickford	196,868	Nov. 6, 1877	133	40	12	779
Tug, Shaft	W. Obertrifer	197,527	Nov. 27, 1877	851	254	12	909
Tug, Spring draft	F. Dawson	197,615	Nov. 27, 1877	944	280	12	922
Tug, Thill	J. T. Smith	198,702	Dec. 25, 1877	1022	311	12	1118
Tunnel, Shield	T. Joynes	192,512	June 26, 1877	1048	315	11	1142
Tunneling and excavating machine	H. N. Cargill	197,456	Nov. 27, 1877	776	232	12	898
Turbine gate	J. H. Staples	195,460	Sept. 25, 1877	739	218	12	528
Turbine wheel	E. M. Hale	192,648	July 3, 1877	98	28	12	25
Turbine wheel	T. H. Risdon and W. W. Tyler	193,283	July 17, 1877	754	231	12	130
Turbine wheel	J. Stewart	198,429	Dec. 18, 1877	746	226	12	1070
Turning angular bodies having convex surfaces	S. Fischlowitz	198,012	Dec. 11, 1877	312	96	12	1000
Turnstile	A. F. Swan	188,437	Mar. 13, 1877	481	149	11	451
Turnstiles, Electro-magnetic registering apparatus for.	B. F. Card	192,361	June 26, 1877	902	270, 271	11	1124
Tuyere	I. S. Van Winkle	192,396	June 26, 1877	940	281	11	1128
Tuyere	P. L. Weimer	194,063	Aug. 14, 1877	283	84	12	279
Tuyere	C. A. Wolff	190,108	Apr. 24, 1877	1151	350	11	732
Tuyere-machine	J. E. Atwood	189,295	Apr. 10, 1877	293	93	11	605
Twine-holder	A. Beausoleil	191,914	June 12, 1877	391	121, 122	11	1033
Twine-holder	A. J. Morrison	196,819	Nov. 6, 1877	81	25	12	772
Twine-holder	J. C. White	191,788	June 12, 1877	271	84	11	1018
Twist-drill clearing-machine	J. R. Stetson	195,963	Oct. 9, 1877	286	80	12	609
Twist-drills, Machine for making	C. F. Jacobson	190,592	May 8, 1877	491	146	11	818
Twister, Roving	J. S. Kirks	186,851	Jan. 30, 1877	1056	336	11	184
Type carrier, Distributer	W. A. Lorenz and C. D. Hughes	194,524	Aug. 28, 1877	777	231	12	361
Type-case	A. A. De Calonne	195,806	Oct. 2, 1877	110	33	12	577
Type-case	J. Ropes	198,686	Dec. 25, 1877	1007	306	12	1116
Type-casting matrice	C. S. Westcott	193,628	July 31, 1877	1131	339	12	200
Type-distributing machine	R. T. P. Allen	195,072	Sept. 11, 1877	328	99, 100	12	453
Type-distributing machine	J. M. Howe	190,434	May 8, 1877	337	99	11	799
Type-distributing machine	D. Reynolds	192,281	June 19, 1877	793	241, 242	11	1098
Type, Hard-metal	G. W. Casilear	193,805	Aug. 7, 1877	9	3	12	236
Type-machine	A. M. Howard	187,278	Feb. 13, 1877	358	114, 115	11	263
Type-mold	T. Mason	187,880	Feb. 27, 1877	979	304	11	361
Type-setting machine	D. Reynolds and J. Thorne	196,826	Nov. 6, 1877	86	27	12	773
Type-writer	J. T. Anderson	187,080	Feb. 6, 1877	155	52	11	224
Type-writer	E. T. Davis	197,614	Nov. 27, 1877	940	280	12	922
Type-writer	P. Deming	191,120	May 22, 1877	1042	312	11	907
Type-writer	D. H. Sherman	191,617	June 5, 1877	98	31	11	989
Type-writer	C. H. Stanton	191,382	May 29, 1877	1296	393	11	950
Type-writers, Ink-ribbon chamber for	P. Deming	193,642	July 31, 1877	1149	344	12	202
Type-writers, Sound-deadening case for	P. Deming	197,833	Dec. 4, 1877	127	39	12	964
Type-writing machine	G. H. Morgan	195,149	Sept. 11, 1877	405	121, 122	12	465

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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U.							
Umbrella	E. Charageat	190,551	May 8, 1877	452	134	11	813
Umbrella	A. E. Cohn	190,006	Apr. 24, 1877	1036	316	11	718
Umbrella	H. Falcina	192,496	June 26, 1877	1028	310	11	1140
Umbrella	R. S. Galbraith	192,822	July 10, 1877	293	85	12	60
Umbrella	A. Gilson	198,374	Dec. 18, 1877	692	211	12	1062
Umbrella	W. S. Harris	193,868	Aug. 7, 1877	66	21	12	243
Umbrella	T. G. Hojer	192,119	June 19, 1877	625	190	11	1076
Umbrella	W. H. Richardson	185,967	Jan. 2, 1877	155	47	11	28
Umbrella-cover	J. C. Hurcombe	193,961	Aug. 7, 1877	160	49	12	256
Umbrella-covers, Clasp-tip for	J. C. Hurcombe	198,621	Dec. 25, 1877	942	288	12	1107
Umbrella-frame	T. W. Ball	187,081	Feb. 6, 1877	157	52	11	224
Umbrella-handle	C. F. Dollner	195,107	Sept. 11, 1877	366	110	12	459
Umbrella-handle	F. J. Kaldenberg	190,496	May 8, 1877	398	116	11	806
Umbrella-holder	A. T. Martin, jr	196,814	Nov. 6, 1877	77	23	12	772
Umbrella-holder	H. W. Pettibone	194,169	Aug. 14, 1877	406	121	12	295
Umbrella notch-ring	A. Milliken	198,549	Dec. 25, 1877	873	266	12	1097
Umbrella rib-tip	A. A. Valentine and H. A. Morrison.	186,907	Jan. 30, 1877	1107	342	11	191
Umbrella-runner	W. E. Brock	188,099	Mar. 6, 1877	130	39	11	398
Umbrella-runner	F. S. Brown	187,998	Mar. 6, 1877	42	11	11	386
Umbrella-runner	A. Good	187,615	Feb. 20, 1877	700	217	11	315
Umbrella-runner	C. Harrison	196,010	Oct. 9, 1877	332	94	12	616
Umbrella-runner	J. J. Higgins	189,859	Apr. 24, 1877	886	270	11	698
Umbrella-runner	T. G. Hojer	189,460	Apr. 10, 1877	452	142	11	625
Umbrella-runner	A. B. Knapp	196,586	Oct. 30, 1877	957	277	12	731
Umbrella-runner	P. Molloy	186,600	Jan. 23, 1877	801	247	11	141
Umbrella runner and tip-cup	O. M. Smith	186,630	Jan. 23, 1877	830	256	11	145
Umbrella-support	B. B. Smith, sr	191,782	June 12, 1877	265	83	11	1017
Umbrella-support for vehicles	J. H. Andrus and T. L. Hammond.	197,536	Nov. 27, 1877	863	257	12	911
Umbrella tip-cup	E. Croft	192,638	July 3, 1877	87	26	12	24
Umbrella tip cup	L. Cutting	187,520	Feb. 20, 1877	614	190	11	304
Umbrella tip-cup	H. S. Frost	192,912	July 10, 1877	376	111	12	71
Umbrella tip-cup	T. G. Hojer	187,853	Feb. 27, 1877	956	297	11	357
Umbrella tip-cup	G. K. Johnson, jr	188,297	Mar. 13, 1877	340	106	11	432
Umbrella tip-cup	R. Lublinski	189,564	Apr. 17, 1877	571	177	11	649
Umbrella tip-cup	B. J. Riley	195,952	Oct. 9, 1877	275	77	12	607
Umbrella tip-cup and drip-cup, Combined	C. C. Clay	188,857	Mar. 27, 1877	917	279	11	528
Under-garment	S. T. Converse	189,609	Apr. 17, 1877	615	190	11	655
Under-garment	C. C. Curtis	187,358	Feb. 13, 1877	443	139	11	274
Undershirt and drawers, Combined	L. R. Sharp	186,693	Jan. 30, 1877	897	277	11	163
Under-suit	C. L. Bradley	198,505	Dec. 25, 1877	835	254	12	1091
Under-waist	S. F. Folletto	187,840	Feb. 27, 1877	944	293	11	356
Universal joint	P. Burgess	197,541	Nov. 27, 1877	868	258	12	911
Universal joint	J. B. Ralston	197,495	Nov. 27, 1877	816	243	12	904
Upholstering purposes, Preparing the fiber of palmetto-leaves for.	G. F. Miller	193,668	July 31, 1877	1178		12	206
Upholstering-tuft	R. H. Bryant	191,650	June 5, 1877	132	41	11	994
Urinal	J. W. Osborne	192,045	June 12, 1877	530	163	11	1051
Urinal for invalids	R. H. Olmstead	190,244	May 1, 1877	124	37	11	763
Urinal or water-closet basin	J. H. Keyser	190,767	May 15, 1877	692	204	11	852
Urn, Water	E. A. Parker	190,895	May 15, 1877	804	238	11	867
V.							
Vaccinating instrument	T. S. Brinkerhoff	193,076	July 17, 1877	538	163	12	101
Vaccine matter, Prepared	W. C. Cutler	197,612	Nov. 27, 1877	939	279	12	922
Vacuum-brake coupling	F. W. Eames	193,078	July 17, 1877	539	163	12	102
Vacuum-brake coupling	F. W. Eames	198,584	Dec. 25, 1877	901	276	12	1101
Vacuum-pan heating apparatus	D. B. Cobb	193,488	July 24, 1877	967	293	12	168
Valise, &c., lock	A. Oberndorfer	194,715	Aug. 28, 1877	946	281	12	385
Valve	T. Boldemann	186,533	Jan. 23, 1877	735	226	11	132
Valve	S. Lloyd	195,294	Sept. 18, 1877	570	166	12	496
Valve	W. Mann and S. Owens	189,049	Apr. 3, 1877	35	12	11	563
Valve	T. F. Rowland	196,311	Oct. 23, 1877	679	193	12	679
Valve	S. L. Wiegand	191,500	May 29, 1877	1429	431	11	965
Valve adjuster, slide	H. B. Doolittle	195,748	Oct. 2, 1877	58	17	12	569
Valve and gas-trap for stationary wash-basins, Combined overflow.	A. K. Grim and J. B. Low	198,456	Dec. 25, 1877	786	239	12	1084
Valve attachment to utilize the escape-steam, Safety.	H. G. Ashton	186,783	Jan. 30, 1877	977	304	11	175
Valve attachment to utilize the escape-steam, Safety	H. G. Ashton	197,073	Nov. 13, 1877	357	105	12	819
Valve attachment to utilize waste steam, Safety	W. H. Garrecht	192,329	June 26, 1877	870	263	11	1119
Valve, Automatic check	O. Collier	189,194	Apr. 3, 1877	160	56	11	580
Valve, Balance	H. E. Marchand	187,157	Feb. 6, 1877	226	74	11	233
Valve, Balance slide	L. H. Hall	186,129	Jan. 9, 1877	384	96	11	58
Valve, Balance slide	T. M. Nagle	189,055	Apr. 3, 1877	41	14	11	564
Valve, Balanced	R. W. Aitken	197,076	Nov. 13, 1877	360	106	12	820
Valve, Balanced	W. Hardwick	194,147	Aug. 14, 1877	314	114	12	292
Valve, Balanced	W. Stephens	189,512	Apr. 10, 1877	498	157	11	631
Valve, Balanced slide	R. Hammond	195,005	Sept. 11, 1877	257	78, 79	12	443
Valve, Balanced slide	W. J. Westwood	193,305	July 17, 1877	777	238	12	133
Valve, Balanced steam	D. C. Stotts	194,481	Aug. 21, 1877	726	216	12	345
Valve, Blowing-engine	W. H. Harrison	195,361	Sept. 18, 1877	626	186	12	504
Valve, Check	L. C. Rodier	197,226	Nov. 20, 1877	531	157	12	853
Valve-connection	G. H. Corliss	185,855	Jan. 2, 1877	40	12	11	14
Valve, Deep-well check	W. J. Sherriff	193,350	July 24, 1877	838	257	12	159
Valve, Engine	E. O'Neill	191,812	June 12, 1877	296	91, 92	11	1021
Valve for air-brakes, Exhaust	A. F. Gue	190,030	Apr. 24, 1877	1063	323	11	721
Valve for air-brakes, Relief	S. R. Kneeland	190,223	May 1, 1877	108	31	11	760
Valve for casks, Automatic relief	A. Smith	187,563	Feb. 20, 1877	648	202	11	308
Valve for compound engines, Rotary	I. Munden	193,455	July 24, 1877	938	285	12	164
Valve for hot-blast pipes	T. Whitwell	195,861	Oct. 2, 1877	171	48	12	585

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Valve for hydraulic machines, Relief	C. Sellers	185,975	Jan. 2, 1877	161	49	11	29
Valve for pumping-engines, Steam	J. Tregoning	193,736	July 31, 1877	1235	370	12	214
Valve for sewers, Ball-check	B. C. Hay	193,605	July 31, 1877	1106	332	12	197
Valve for steam-cylinders, Automatic relief	J. M. Hartman	190,757	May 15, 1877	681	202	11	850
Valve for steam-engines, Balanced	W. Jackson	187,014	Feb. 6, 1877	98	33	11	215
Valve for steam-engines, Balanced	T. Poore	193,383	July 24, 1877	870	266	12	154
Valve for steam-engines, Cirenlar	H. L. Tumy	189,400	Apr. 10, 1877	397	126	11	618
Valve for steam-engines, Oscillating	W. Hardwick	194,238	Aug. 14, 1877	468	142	12	304
Valve for steam-engines, Oscillating	L. Mangold	193,981	Aug. 7, 1877	183	55	12	259
Valve for steam-engines, Reversing	S. H. Bevins	186,297	Jan. 16, 1877	474	146	11	87
Valve for steam-engines, Rotary	P. Brotherhood	196,189	Oct. 16, 1877	529	153	12	651
Valve for steam pumping-engines	N. W. Wheeler	189,290	Apr. 3, 1877	262	87	11	593
Valve for twin engines	P. Lohmeyer	191,352	May 29, 1877	1273	384	11	947
Valve for wash-bowls, tubs, &c., Overflow and discharge.	H. Ogden	196,928	Nov. 6, 1877	202	59	12	788
Valve, Garden	V. Kingwell	198,121	Dec. 11, 1877	419	130	12	1015
Valve, Gate	L. C. Rodier	197,227	Nov. 20, 1877	532	157	12	853
Valve-gear	W. Johnson	186,135	Jan. 9, 1877	319	97	11	59
Valve-gear	W. H. Pierce	197,795	Dec. 4, 1877	91	28	12	958
Valve-gear	T. Scheffler	190,083	Apr. 24, 1877	1123	341	11	728
Valve-gear	A. M. Scott and J. J. Roth	192,459	June 26, 1877	991	298	11	1136
Valve-gear, Steam-engine	J. H. Davis and W. White	193,440	July 24, 1877	923	281	12	162
Valve-gear, Steam-engine	J. D. Hazlet	193,606	July 31, 1877	1106	332	12	197
Valve-gear, Steam-engine	J. D. Hazlet	197,780	Dec. 4, 1877	76	24	12	956
Valve-gear, Steam-engine	J. C. H. Stut	187,931	Feb. 27, 1877	1032	317	11	367
Valve-gear, Steam-engine	A. J. Vandegrift	195,466	Sept. 25, 1877	743	219, 220	12	529
Valve-gear, Steam-engine	S. H. Wheeler	187,947	Feb. 27, 1877	1045	322	11	369
Valve-gears of steam-engines, Link for	J. H. Luther	186,403	Jan. 16, 1877	606	185	11	102
Valve, Globe	T. Davis	197,967	Dec. 11, 1877	272	83	12	993
Valve, Globe	W. B. Fowler	188,289	Mar. 13, 1877	330	104	11	430
Valve, Hydrant	J. F. Neall	195,636	Sept. 25, 1877	904	269	12	552
Valve, Hydrant	A. S. Parker	187,169	Feb. 6, 1877	236	77	11	235
Valve, Hydrant	W. Porteous	194,615	Aug. 28, 1877	856	255	12	372
Valve, Hydrant	J. W. Rohn	196,540	Oct. 30, 1877	912	264	12	724
Valve, Hydrant	F. Shriver	193,188	July 17, 1877	646	196	12	116
Valve, Ingress	W. Loughridge	187,022	Feb. 6, 1877	102	35	11	216
Valve-motion and cut-off	E. O'Neill	190,245	May 1, 1877	125	38	11	763
Valve-motion, Steam-engine	H. Haering	191,583	June 5, 1877	67	20	11	985
Valve-motion, Steam-engine	F. B. Rice	194,535	Aug. 28, 1877	787	234	12	362
Valve-motion, Steam-engine	H. Taylor	197,951	Dec. 11, 1877	251	77	12	991
Valve, Oscillating	C. Whitman	188,216	Mar. 6, 1877	252	79	11	413
Valve or regulator for flexible tubes	C. H. Farley	194,664	Aug. 28, 1877	899	268	12	379
Valve or water-cock, Globe	E. Hoehn	191,963	June 12, 1877	446	138	11	1040
Valve, Puppet	H. F. Frisbie	198,098	Dec. 11, 1877	391	122	12	1012
Valve, Relief	N. Du Brul	190,712	May 15, 1877	641	190, 191	11	845
Valve, Relief and safety-stop	C. P. Wiggins	188,556	Mar. 20, 1877	601	185	11	477
Valve, Rotary	J. Jenks	187,638	Feb. 20, 1877	723	224	11	318
Valve, Rotary	D. Job	197,139	Nov. 13, 1877	426	126	12	830
Valve, Safety	R. C. Anderson	196,106	Oct. 16, 1877	446	130	12	640
Valve, Safety	H. G. Ashton and J. E. Maynadier	197,072	Nov. 13, 1877	355	105	12	819
Valve, Safety	N. Du Brul	190,711	May 15, 1877	640	190	11	845
Valve, Safety	W. M. Ernst	190,298	May 1, 1877	183	55	11	770
Valve, Safety	E. B. Kunkle	193,411	July 24, 1877	896	273	12	158
Valve, Safety	S. Maurel and C. L. Trnel	190,884	May 15, 1877	794	235	11	866
Valve, Safety	L. M. Phelps	189,493	Apr. 10, 1877	481	152	11	629
Valve, Safety	F. B. Scoville	191,078	May 22, 1877	1003	299	11	901
Valve, Safety	T. Shaw	193,558	July 24, 1877	1043	312	12	177
Valve, Safety	A. Turnbull	189,816	Apr. 17, 1877	818	253	11	681
Valve-seats, Apparatus for easting	J. Berry	186,449	Jan. 23, 1877	663	203	11	122
Valve, Steam	W. Andrews	193,134	July 17, 1877	602	182	12	110
Valve, Steam	E. Cope	191,226	May 29, 1877	1164	349	11	932
Valve, Steam	S. Curtis	191,279	May 29, 1877	1212	364	11	938
Valve, Steam-cylinder	S. L. Walkinshaw	194,941	Sept. 4, 1877	186	57	12	426
Valve, Steam-engine	J. F. Allen	191,275	May 29, 1877	1209	363	11	937
Valve, Steam-engine	S. H. Whitmore	194,493	Aug. 21, 1877	737	219	12	346
Valve, Steam-engine	H. E. Woods	192,041	June 12, 1877	526	162	11	1051
Valve, Steam piston	G. M. Weinman	192,550	June 26, 1877	1085	328	11	1148
Valve, Steam-radiator	J. N. Matlock	193,529	July 24, 1877	1012	305	12	173
Valve, Steam safety	W. B. Mack	191,871	June 12, 1877	352	109	11	1028
Valve, Steam slide	J. Gillies	189,723	Apr. 17, 1877	725	223	11	669
Valve, Stop	G. W. Eddy	187,970	Mar. 6, 1877	14	4	11	382
Valve, Stop	W. F. Thacher	185,987	Jan. 2, 1877	171	53	11	31
Valve, Stop	W. F. Thacher	187,329	Feb. 13, 1877	416	130	11	270
Valve, Straightway	D. Kennedy	187,230	Feb. 13, 1877	313	161	11	257
Valve, Straightway	D. Kennedy	187,231	Feb. 13, 1877	314	101	11	257
Valve, Tank	J. P. Duncan	191,523	June 5, 1877	13	4	11	978
Valve, Throttle and cheek	O. B. Goodwin and H. Essex	187,373	Feb. 13, 1877	455	143	11	276
Valves, Reversible seat for ball	A. K. Hills and W. E. Berens	197,133	Nov. 13, 1877	421	124	12	829
Vanilline, Manufacture of	F. Tiemann	192,542	June 26, 1877	1077		11	1147
Vapor-bath	G. W. Walker	191,905	June 12, 1877	383	119	11	1032
Vapor-bath apparatus	J. V. Hirley	195,448	Sept. 25, 1877	724	214	12	526
Vase or bouquet-holder, Compound	C. Heckert	192,761	July 3, 1877	201	58	12	40
Vases, Device for decorating	W. T. Murphy	198,144	Dec. 11, 1877	440	137	12	1018
Vat: *See* Fermenting-vat.							
Vault-cover and railing	C. H. Straight	195,965	Oct. 9, 1877	287	81	12	609
Vault-cover and ventilator	E. P. Hoyt	196,229	Oct. 16, 1877	571	165	12	657
Vegetable and fruit slicer	J. B. Howard	193,959	Aug. 7, 1877	158	49	12	256
Vegetable and fruit slicer	A. D. Sweet	195,463	Sept. 25, 1877	741	219	12	529
Vegetable and fruit slicer	G. R. Thompson	194,191	Aug. 14, 1877	424	128	12	298
Vegetable-cutter	W. Chapin	191,653	June 5, 1877	134	42	11	994
Vegetable-cutter	A. H. Gerdom	197,353	Nov. 20, 1877	658	195	12	872
Vegetable-cutter	W. Reitz and E. Eichholzer	187,731	Feb. 27, 1877	831	259	11	341

Alphabetical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Vegetable-cutter	M. Reos	196,044	Oct. 9, 1877	367	104	12	621
Vegetable-cutter	H. Sendmeyer	194,731	Aug. 28, 1877	962	286	12	387
Vegetable-cutter	S. W. White	195,681	Sept. 25, 1877	946	282	12	558
Vegetable-masher	E. S. Leslie	188,383	Mar. 13, 1877	427	133	11	444
Vegetable-slicer	J. H. Alfred	189,909	Apr. 24, 1877	937	286	11	705
Vegetable-slicer	J. Kuchinka	190,875	May 15, 1877	787	233	11	864
Vegetable-slicer	F. Schmitt	191,375	May 29, 1877	1290	390	11	949
Vegetable slicer and grater	J. P. Dunwald	191,322	May 29, 1877	1250	376	11	944
Vehicle-axle	B. T. Babbitt	194,398	Aug. 21, 1877	636	191	12	333
Vehicle-axle	A. K. Stone	196,719	Oct. 30, 1877	1084	315	12	748
Vehicle-axle	P. F. White	188,703	Mar. 20, 1877	748	230	11	497
Vehicle-axles, Splicing-bar for	I. Arthur	196,620	Oct. 30, 1877	984	287	12	735
Vehicle-body	H. Beard	195,437	Sept. 25, 1877	715	211	12	525
Vehicle-body	T. Tostevin	192,953	July 10, 1877	414	124	12	77
Vehicle-brake	L. J. Fitzgerald	194,515	Aug. 28, 1877	770	228	12	360
Vehicle-brake	W. P. Pickard	192,932	July 10, 1877	392	117	12	74
Vehicle-brake lever	E. J. Anderson	192,961	July 10, 1877	422	127	12	78
Vehicle-brake lock	J. Hahn	194,348	Aug. 21, 1877	595	178	12	527
Vehicle dash-board	G. M. Peters	196,475	Oct. 23, 1877	826	239	12	701
Vehicle dash-rail	B. C. Converse	195,802	Oct. 2, 1877	107	31	12	576
Vehicle draft attachment	M. D. Nelon	198,666	Dec. 25, 1877	990	301	12	1114
Vehicle draft attachment	G. Otto and T. Simon	187,410	Feb. 13, 1877	488	152	11	280
Vehicle draft-tip	A. Marshall	194,098	Aug. 14, 1877	317	94	12	284
Vehicle dress-protector	D. R. Harder	187,377	Feb. 13, 1877	459	144	11	276
Vehicle-gearing	D. G. Wyeth	187,694	Feb. 20, 1877	771	240	11	324
Vehicle-heating apparatus	A. C. Goodell, jr	192,067	June 19, 1877	574	174	11	1069
Vehicle-holdback	C. J. Ellsworth	192,422	June 26, 1877	958	287	11	1131
Vehicle holdback	A. B. Roberts	193,284	July 17, 1877	756	232	12	130
Vehicle-jack	H. B. Rowland and W. S. Gayde	195,171	Sept. 11, 1877	433	129	12	469
Vehicle-platform spring	J. Milks and E. H. Watson	189,871	Apr. 24, 1877	897	274	11	700
Vehicle-propeller	E. G. Adams	195,553	Sept. 25, 1877	823	244	12	541
Vehicle running-gear	J. W. and W. J. Drew, and W. M. Robinson.	191,321	May 29, 1877	1248	375 376	11	943
Vehicle running-gear	G. R. Duval	194,341	Aug. 21, 1877	588	176	12	326
Vehicle running-gear	A. Graham	198,455	Dec. 25, 1877	785	238	12	1084
Vehicle running-gear	F. A. Presko	190,365	May 1, 1877	245	73	11	778
Vehicle running-gear	E. D. Weller	185,992	Jan. 2, 1877	176	54, 55	11	32
Vehicle running-gear	E. D. Weller	185,993	Jan. 2, 1877	178	55	11	32
Vehicle sand-band	A. Kaiser	195,613	Sept. 25, 1877	881	262	12	549
Vehicle-seat	F. Oppenheim	196,821	Nov. 6, 1877	82	25	12	772
Vehicle-seat	F. Reichle	195,453	Sept. 25, 1877	732	216	12	527
Vehicle-seat fastener	W. J. Elsom	194,513	Aug. 28, 1877	768	228	12	359
Vehicle-seat spring	R. H. Guyer	195,122	Sept. 11, 1877	381	115	12	461
Vehicle-seats, Lazy-back for	J. J. Newsom	196,377	Oct. 23, 1877	735	211	12	688
Vehicle-shade	J. H. Andrus and T. L. Hammond	198,444	Dec. 25, 1877	775	235	12	1083
Vehicle-shaft coupling	G. Beck	186,976	Feb. 6, 1877	61	20	11	210
Vehicle, Side-bar spring	J. F. Bridget	189,183	Apr. 3, 1877	146	52	11	579
Vehicle, Side-spar	G. W. Warren	194,748	Aug. 28, 1877	985	292	12	390
Vehicle, Side-spring	W. W. Grier	197,930	Dec. 11, 1877	231	71	12	988
Vehicle, Side-spring	T. J. Magner and C. L. Thomas	196,757	Nov. 6, 1877	22	6	12	763
Vehicle, Side-spring	M. Throop and W. H. Doyle	192,033	June 12, 1877	514	157	11	1049
Vehicle-spring	S. N. Beecher	185,884	Jan. 2, 1877	68	21	11	17
Vehicle-spring	A. B. Bishop	192,969	July 10, 1877	430	129	12	79
Vehicle-spring	F. W. Faber	191,040	May 22, 1877	971	288	11	896
Vehicle-spring	L. A. Fogg	187,262	Feb. 13, 1877	344	109	11	261
Vehicle-spring	W. Foote	190,841	May 15, 1877	753	223	11	860
Vehicle-spring	J. W. Groat	189,355	Apr. 10, 1877	352	113	11	612
Vehicle-spring	C. J. Holman	191,428	May 29, 1877	1341	406	11	955
Vehicle-spring	H. L. Isham	191,150	May 22, 1877	1071	320	11	910
Vehicle-spring	J. W. McGowen	187,658	Feb. 20, 1877	742	230	11	320
Vehicle-spring	F. Oppenheim	196,820	Nov. 6, 1877	81	25	12	772
Vehicle-spring	G. A. Richards	185,968	Jan. 2, 1877	156	48	11	29
Vehicle-spring	W. W. Sayers	186,883	Jan. 30, 1877	1085	336	11	188
Vehicle-spring	E. T. Westerfield	198,717	Dec. 25, 1877	1035	315	12	1120
Vehicle-spring	F. B. Zay and J. Dennison	187,500	Feb. 20, 1877	597	185	11	301
Vehicle spring and axle	S. W. Ludlow	191,536	June 5, 1877	30	9	11	980
Vehicle-spring attachment	G. H. Spencer	194,622	Aug. 28, 1877	861	256	12	373
Vehicle-spring brace	M. Newton	196,536	Oct. 30, 1877	909	263	12	724
Vehicle-spring coupling	I. S. Krick	195,616	Sept. 25, 1877	883	262	12	549
Vehicle-spring head	R. B. Hughes	194,093	Aug. 14, 1877	313	92	12	284
Vehicle spring-seat	R. Dudley	195,888	Oct. 9, 1877	206	59	12	599
Vehicle spring-seat and reach	A. J. White	194,201	Aug. 14, 1877	432	131	12	299
Vehicle-spring, Wooden	G. H. Thompson and G. P. Muldoon.	198,321	Dec. 18, 1877	640	195	12	1054
Vehicle-top	L. J. Fitzgerald	194,516	Aug. 28, 1877	771	229	12	360
Vehicle-top support	H. R. Marlatt and A. W. Wright	186,428	Jan. 23, 1877	640	196	11	120
Vehicle torsion-spring	R. Dudley	187,606	Feb. 20, 1877	689	214	11	314
Vehicle torsion-spring	C. H. Ferguson	197,351	Nov. 20, 1877	657	195	12	872
Vehicle, Two-wheeled	E. B. Simpson	195,663	Sept. 25, 1877	930	277	12	556
Vehicle-ventilator	J. E. Richards	190,369	May 1, 1877	249	74	11	779
Vehicle-wheel	G. F. Almy	186,289	Jan. 16, 1877	469	144	11	86
Vehicle-wheel	J. Bacon	193,747	July 31, 1877	1243	373	12	216
Vehicle-wheel	C. E. Bush	196,873	Nov. 6, 1877	145	43	12	780
Vehicle-wheel	D. and A. W. Davis	186,812	Jan. 30, 1877	1007	313	11	179
Vehicle-wheel	W. J. Drew	195,875	Oct. 2, 1877	182	52	12	587
Vehicle-wheel	C. W. Helden	198,384	Dec. 18, 1877	703	213	12	1063
Vehicle-wheel	J. E. Howell	187,859	Feb. 27, 1877	961	298	11	358
Vehicle-wheel	J. McGowan	189,318	Apr. 10, 1877	320	101	11	608
Vehicle-wheel	I. W. Mead	197,155	Nov. 13, 1877	442	130	12	832
Vehicle-wheel	H. Mounts	186,360	Jan. 16, 1877	555	169	11	96
Vehicle-wheel	A. A. Philbrick	186,158	Jan. 9, 1877	338	104	11	62
Vehicle-wheel	M. J. Racer	192,934	July 10, 1877	394	117	12	74
Vehicle-wheel	D. Remington	192,189	June 19, 1877	692	212	11	1085
Vehicles, Device for attaching horses to	H. E. Chadwick	189,842	Apr. 24, 1877	871	265	11	696

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				Spec.	Dr'g.	Vol.	Page.
Vehicles, Timing attachment for racing	J. L. Bocne and E. J. Fraser	197, 593	Nov. 27, 1877	919	274	12	919
Velocipede	J. Higgins and P. Traynor	194, 681	Aug. 28, 1877	917	273	12	381
Velocipede	J. L. Hornig	191, 145	May 22, 1877	1067	319	11	910
Velocipede	W. Katon and P. Bonfils	186, 136	Jan. 9, 1877	320	98	11	59
Velocipede	C. C. Kerr	198, 627	Dec. 25, 1877	952	290	12	1108
Velocipede	W. S. Mitchell	190, 353	May 1, 1877	234	69	11	777
Velocipede	J. H. Nolan	193, 098	July 17, 1877	571	172	12	105
Velocipede	J. Smith and E. T. Thurston	196, 943	Nov. 6, 1877	214	63	12	790
Velocipede	W. H. H. Stineman and C. T. Holloway.	186, 379	Jan. 16, 1877	580	177	11	99
Velocipede	E. Whitehead	194, 980	Sept. 11, 1877	236	72	12	440
Velocipede	H. Will and C. Uehele	189, 588	Apr. 17, 1877	595	184	11	653
Velocipede foot-rest and seat	E. H. Turner	192, 545	June 26, 1877	1080	326	11	1147
Velocipede-step	J. Shaller	192, 022	June 12, 1877	503	154	11	1047
Veneer-cutting machine	W. E. Harris	198, 019	Dec. 11, 1877	317	98	12	1001
Veneer-cutting machine	J. D. McEachren	198, 404	Dec. 18, 1877	720	218 219	12	1066
Veneer, Manufacturing tongued and grooved	W. E. Brock	195, 338	Sept. 18, 1877	608	179	12	501
Veneers, Composition of matter for	C. H. Land	186, 483	Jan. 23, 1877	692		11	126
Veneers, Embossing mounted	C. H. Hagemann	198, 381	Dec. 18, 1877	699	213	12	1062
Vent, Air-pressure fluid	H. B. Park	198, 672	Dec. 25, 1877	994	302	12	1114
Vent apparatus	G. Schott and G. P. Heberling	190, 910	May 15, 1877	820	242	11	869
Vent attachment for beer-barrels	F. Schultz	189, 795	Apr. 17, 1877	803	247	11	679
Vent for barrels, &c	G. W. Moore	187, 478	Feb. 20, 1877	574	178	11	298
Vent-plug for beer-barrels	J. Acnis	194, 508	Aug. 28, 1877	763	227	12	59
Ventilating and other passages, Automatic regulator for.	H. M. Lane	196, 678	Oct. 30, 1877	1045	303	12	742
Ventilating and warming machine	T. Winans	187, 792	Feb. 27, 1877	894	278	11	349
Ventilating buildings	J. F. Cameron	186, 078	Jan. 9, 1877	267	80	11	52
Ventilating buildings	L. A. Johnson	186, 736	Jan. 30, 1877	935	290	11	169
Ventilating halls, &c	P. Mihan	186, 053	Jan. 9, 1877	244	73	11	49
Ventilating soil and drain pipes, &c., Apparatus for	E. G. Banner	187, 503	Feb. 20, 1877	599	186	11	302
Ventilation and disinfection of buildings	W. H. Bennett	191, 512	June 5, 1877	2	1	11	977
Ventilator: *See* Building-ventilator. Kitchen-ventilator. Car-ventilator. Ship's ventilator. Chimney-ventilator. Smoke-ventilator. Grain-ventilator. Vehicle-ventilator.							
Ventilator	A. Barnum	192, 557	July 3, 1877	1	1	12	13
Ventilator	C. E. Darling	191, 033	May 22, 1877	964	286	11	895
Ventilator	T. M. Foster	192, 688	July 3, 1877	141	39	12	31
Ventilator	R. S. Grigsby	197, 775	Dec. 4, 1877	73	23	12	956
Ventilator	G. W. Harrold and L. Satterlee	189, 456	Apr. 10, 1877	447	140	11	624
Ventilator	G. Hayes	198, 107	Dec. 11, 1877	404	126	12	1013
Ventilator	J. B. Hill	186, 251	Jan. 16, 1877	435	134	11	82
Ventilator	P. Mihan	186, 052	Jan. 9, 1877	244	73	11	49
Ventilator	P. Mihan	186, 054	Jan. 9, 1877	245	74	11	50
Ventilator	P. Mihan	189, 376	Apr. 10, 1877	369	119	11	615
Ventilator	P. Mihan	195, 832	Oct. 2, 1877	137	39	12	580
Ventilator	P. Mihan	196, 099	Oct. 16, 1877	437	127	12	638
Ventilator	G. R. Moore	189, 054	Apr. 3, 1877	40	14	11	564
Ventilator	T. Owens	195, 039	Sept. 11, 1877	296	90	12	448
Ventilator	J. Sandall, jr	186, 062	Jan. 9, 1877	253	76	11	50
Ventilator	H. M. Sanders	195, 660	Sept. 25, 1877	928	276	12	556
Ventilator	G. A. Unkrich	187, 433	Feb. 13, 1877	517	159	11	283
Ventilator	G. Yon	189, 006	Mar. 27, 1877	1057	325	11	547
Ventilator and chimney-cap	C. A. Vaile	196, 504	Oct. 23, 1877	863	249	12	705
Ventilator in the windows of buildings	L. D. Harvey	193, 948	Aug. 7, 1877	148	45	12	255
Vermin, Destroying	T. S. Church	194, 861	Sept. 4, 1877	105		12	415
Vermin-trap	J. M. A. Berger	190, 732	May 15, 1877	661	196	11	848
Vessels, Brake and auxiliary rudder for	J. Hutton	188, 368	Mar. 13, 1877	412	128	11	442
Vessels, Buoying	J. C. Wheeden	196, 900	Nov. 6, 1877	223	68	12	792
Vessels, Camel for raising	J. S. Dowdle	186, 666	Jan. 30, 1877	870	269	11	160
Vessels, Ceiling for grain	F. Dassori	196, 338	Oct. 23, 1877	697	201	12	683
Vessels, Composition sheathing for	F. P. Warren and E. Field	192, 037	June 12, 1877	522	161	11	1050
Vessels, Construction of hulls of	W. B. Whiting	187, 742	Feb. 27, 1877	844	263	11	343
Vessels, Construction of sailing	N. G. Herreshoff	189, 459	Apr. 10, 1877	450	141	11	625
Vessels, Mechanism for lessening draft of	E. Ellison	186, 331	Jan. 16, 1877	526	159	11	92
Vessels, Relieving stranded	H. F. Knapp	189, 233	Apr. 3, 1877	198	67	11	585
Vessels, Telescopic ballasting-tube for	A. Berghold	189, 420	Apr. 10, 1877	415	130	11	620
Vessels, Torpedo-guard for	B. A. Richardson	193, 727	July 31, 1877	1226	368	12	213
Vessels, Unloading grain	C. J. Mann	188, 924	Mar. 27, 1877	980	300	11	537
Vest and shirt-front, Combined	B. Loffler and J. Weil	187, 720	Feb. 27, 1877	823	256	11	340
Vest, Hunting	G. C. Henning	188, 052	Mar. 6, 1877	95	28	11	393
Vine clamp or fastener	G. F. Muller	194, 102	Aug. 14, 1877	320	95	12	285
Vinegar-generator	L. Eisenbeis and C. Nau	193, 324	July 24, 1877	814	250	12	146
Violin attachment	H. Barrenther	196, 325	Oct. 23, 1877	683	197	12	681
Violin-chin-rest	E. W. Bridge	187, 996	Mar. 6, 1877	41	11	11	386
Violin chin-rest	H. W. White	196, 962	Nov. 6, 1877	230	69	12	792
Violin for practice	C. F. Albert	189, 677	Apr. 17, 1877	680	210	11	663
Violin-strings, Pocket-box for	J. S. Ashman	197, 585	Nov. 27, 1877	911	272	12	917
Vise	A. H. Bell	197, 083	Nov. 13, 1877	370	109	12	821
Vise	J. F. Hall and E. P. Cook	187, 131	Feb. 6, 1877	203	66	11	230
Vise	T. P. Hardy	189, 731	Apr. 17, 1877	737	226	11	670
Vise	M. T. Henson and M. Osborn	196, 578	Oct. 30, 1877	949	275	12	729
Vise	W. S. Snediker	188, 688	Mar. 20, 1877	729	224	11	494
Vise, Anvil	A. H. Anderson	196, 854	Nov. 6, 1877	121	36	12	778
Vise, Bench	E. H. Brower	192, 147	June 19, 1877	654	200	11	1079
Vise, Carpenter's bench	W. H. Frampton	187, 117	Feb. 6, 1877	191	63	11	229
Volute motor-spring	D. Carter	192, 564	July 3, 1877	8	3	12	14
Vulcanized fiber, Can or vessel from	W. Courtenay	193, 323	July 24, 1877	814	250	12	146
Vulcanized fiber, Making hollow articles of	W. Courtenay	193, 322	July 24, 1877	813		12	146
Vulcanized fiber, Manufacture of	T. Hanna	196, 895	Nov. 6, 1877	165		12	783
Vulcanized fiber, Manufacture of water-proof	T. Hanna	196, 894	Nov. 6, 1877	165		12	783

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W.							
Waffle-iron	J. T. Lambert	189,753	Apr. 17, 1877	760	233	11	673
Wagon	J. W. Rittenberry	190,622	May 8, 1877	526	156	11	823
Wagon-axle	W. F. Buckelew	191,305	May 29, 1877	1237	272	11	941
Wagon-axle skein	H. L. Hinds	191,679	June 5, 1877	160	49	11	998
Wagon-axle, Trussed	C. E. Cookerly	193,849	Aug. 9, 1877	48	16	12	241
Wagon-bed	R. R. Hunt	189,462	Apr. 10, 1877	454	142, 143	11	625
Wagon-bed	W. J. Kinsey	192,699	July 3, 1877	150	42	12	33
Wagon-bed and hay-rack, Convertible	J. M. O'Neall	188,661	Mar. 20, 1877	705	216	11	491
Wagon-bodies, Metal corner for	B. Burr	187,453	Feb. 20, 1877	551	170	11	295
Wagon-body	J. P. Gordon	197,844	Dec. 4, 1877	138	42	12	965
Wagon-body, Extensible	F. Oppenheim	188,255	Mar. 13, 1877	297	94	11	426
Wagon-body iron	B. Burr	187,452	Feb. 20, 1877	550	170	11	295
Wagon-body, Metal	S. P. Graham	190,311	May 1, 1877	196	58	11	771
Wagon-bolster stay-rod	C. A. Weed	187,953	Feb. 27, 1877	1052	324	11	370
Wagon-box corner	W. B. Botsford	194,573	Aug. 28, 1877	821	244	12	367
Wagon-box strap-bolt	J. Jensen	189,467	Apr. 10, 1877	458	144	11	626
Wagon-brake	R. M. Baker	186,447	Jan. 23, 1877	661	202	11	122
Wagon-brake	E. Bennett	185,885	Jan. 2, 1877	69	21	11	17
Wagon-brake	C. F. J. Benthin	192,220	June 19, 1877	726	222	11	1089
Wagon-brake	J. T. and I. R. Bryan	196,426	Oct. 23, 1877	774	224	12	695
Wagon-brake	M. Clifford	191,932	June 12, 1877	411	127	11	1035
Wagon-brake	W. F. Ely	192,819	July 10, 1877	290	85	12	60
Wagon-brake	A. Hart	197,778	Dec. 4, 1877	75	23	12	956
Wagon-brake	C. Heinen	195,275	Sept. 18, 1877	551	160	12	493
Wagon-brake	R. Hurd	187,863	Feb. 27, 1877	964	300	11	358
Wagon-brake	T. C. Lawrence	193,878	Aug. 7, 1877	73	24	12	245
Wagon-brake	D. C. Montgomery	187,404	Feb. 13, 1877	484	151	11	279
Wagon-brake	J. M. O'Neall	192,275	June 19, 1877	788	240	11	1097
Wagon-brake	J. M. Van Derzee	187,786	Feb. 27, 1877	888	277	11	348
Wagon-brake	T. Whyte	194,753	Aug. 28, 1877	988	293	12	390
Wagon-brake	W. O. Williams	187,691	Feb. 20, 1877	769	239	11	324
Wagon-brake, Automatic	H. Hunt	198,389	Dec. 18, 1877	707	215	12	1063
Wagon-brake, Automatic	L. Seivert, J. Dietzen, and C. Stoetzel.	193,044	July 10, 1877	502	151	12	88
Wagon-brake, Automatic	C. T. Warren	186,776	Jan. 30, 1877	972	302	11	174
Wagon-brake, Automatic	W. L. Whitman and E. Manes	196,406	Oct. 23, 1877	759	219	12	692
Wagon-brake lever	J. W. Anderson	187,579	Feb. 20, 1877	664	207	11	311
Wagon-brake lever	W. G. Collins	194,294	Aug. 21, 1877	537	162	12	320
Wagon-brake lever	J. F. Klinglesmith	189,750	Apr. 17, 1877	758	233	11	673
Wagon-brake lever	J. G. Morton	186,489	Jan. 23, 1877	695	213	11	127
Wagon-brake lever	J. P. Outson	191,366	May 29, 1877	1284	388	11	948
Wagon-brake lever	P. Thompson	192,032	June 12, 1877	513	157	11	1049
Wagon-brake lock	S. H. Miller	189,052	Apr. 3, 1877	38	13	11	564
Wagon-brake, Removable	E. Spears	187,566	Feb. 20, 1877	650	202	11	309
Wagon-brake shoe	I. E. S. Alexander	194,118	Aug. 14, 1877	358	106	12	188
Wagon-brakes, &c., Lever-pawl and ratchet for operating.	J. R. Robinson	185,970	Jan. 2, 1877	157	48	11	29
Wagon, Buckboard	C. D. Le Grand	197,735	Dec. 4, 1877	30	10	12	950
Wagon, Buckboard	J. L. Phillips	193,892	Aug. 7, 1877	92	29	12	247
Wagon-curtain fastener	J. Waters and C. Schuessler	198,252	Dec. 18, 1877	584	177	12	1045
Wagon draft attachment	T. Andress	193,797	Aug. 7, 1877	2	1	12	235
Wagon, Dumping	H. Bailey	197,447	Nov. 27, 1877	762	229	12	897
Wagon, Dumping	C. S. Bateman	192,892	July 10, 1877	359	106	12	69
Wagon, Dumping	G. L. Collins and G. Gascoigne	188,103	Mar. 6, 1877	135	40	11	399
Wagon, Dumping	T. C. Duncanson	194,589	Aug. 28, 1877	833	248	12	369
Wagon, Dumping	R. A. Reed	188,411	Mar. 13, 1877	454	141	11	448
Wagon, Dumping	R. A. Reed	188,541	Mar. 20, 1877	588	182	11	475
Wagon, Dumping	L. Rodenhausen	190,078	Apr. 24, 1877	1118	339	11	728
Wagon, Dumping	J. G. Stafford	191,483	May 29, 1877	1402	423	11	962
Wagon-gearing	W. P. Brown	191,648	June 5, 1877	130	41	11	993
Wagon-gearing	L. W. Frederick	185,909	Jan. 2, 1877	95	29	11	21
Wagon-hound	A. R. Cushman	186,809	Jan. 30, 1877	1005	312	11	178
Wagon-jack	F. A. Boughner	188,335	Mar. 13, 1877	377	118	11	437
Wagon-jack	A. Bratschi	194,574	Aug. 28, 1877	822	244	12	367
Wagon-jack	J. A. Fox	187,116	Feb. 6, 1877	191	62	11	228
Wagon-jack	J. F. Klinglesmith	194,521	Aug. 28, 1877	775	230	12	361
Wagon-jack	H. D. McGeorge	185,941	Jan. 2, 1877	133	39	11	25
Wagon-jack	K. E. Rudd	195,537	Sept. 25, 1877	809	240	12	539
Wagon-loader	J. J. Verckler	189,975	Apr. 24, 1877	1000	305, 306	11	713
Wagon loading and unloading apparatus	J. W. Castleman	192,415	June 26, 1877	954	286	11	1130
Wagon-lock	F. Rakes	186,618	Jan. 23, 1877	820	353	11	144
Wagon, Lumber	W. W. Gawthrop	194,668	Aug. 28, 1877	902	269	12	379
Wagon, Platform	E. H. Booth	189,598	Apr. 17, 1877	605	187	11	654
Wagon, Platform	E. H. Booth	197,758	Dec. 4, 1877	56	18	12	954
Wagon, Platform	N. B. Wood and E. R. Fitch	194,206	Aug. 14, 1877	435	132	12	300
Wagon-platform gear	B. F. Rix	197,799	Dec. 4, 1877	95	29	12	959
Wagon-rack	C. E. Adamson	198,235	Dec. 18, 1877	554	170	12	1041
Wagon, Road	C. W. Saladee	193,040	July 10, 1877	498	150	12	88
Wagon, Road	C. W. Saladee	193,068	July 10, 1877	524	158	12	91
Wagon, Road	C. W. Saladee	197,668	Nov. 27, 1877	990	296	12	929
Wagon, Road	C. W. Saladee	197,669	Nov. 27, 1877	991	296	12	929
Wagon, Road	C. W. Saladee	197,670	Nov. 27, 1877	992	296	12	929
Wagon, Road	C. W. Saladee	197,671	Nov. 27, 1877	993	297	12	930
Wagon running-gear	M. D. Bennett	186,528	Jan. 23, 1877	729	225	11	132
Wagon running-gear and brake	T. G. Mandt	194,160	Aug. 14, 1877	398	118, 119	12	294
Wagon-seat fastening	L. A. and A. L. Davis	186,665	Jan. 30, 1877	869	269	11	160
Wagon-seat lock	C. E. Stone	191,896	June 12, 1877	377	116	11	1031
Wagon-seat spring	G. P. Sweezy	194,189	Aug. 14, 1877	423	127	12	297
Wagon-seat spring	T. Thompson	192,797	July 3, 1877	242	71	12	45
Wagon-seat spring	B. F. Wells	189,160	Apr. 3, 1877	128	46	11	576

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Wagon-seat spring-bar fastening	E. R. Franklin and S. F. Feavel	193,812	Aug. 7,1877	15	5	12	236
Wagon-seats, Spring-back for	J. W. Weed	186,394	Jan. 16,1877	597	182	11	101
Wagon, Side-bar	J. H. Robinson	196,041	Oct. 9,1877	364	104	12	620
Wagon, Side-bar	T. H. Wood	193,792	July 31,1877	1296	389	12	223
Wagon, Side-spar road	C. W. Saladeo	185,871	Jan. 2,1877	54	17	11	16
Wagon, Side-spring	J. Ledwith	186,426	Jan. 23,1877	637	194	11	119
Wagon, Side-spring	H. S. Marvin	198,130	Dec. 11,1877	429	134	12	1017
Wagon-skid attachment	C. Crandall	191,570	June 5,1877	57	17	11	924
Wagon, Spring	J. D. Brunner	190,000	Apr. 24,1877	1032	314	11	717
Wagon-spring	W. H. Haylock and A. Benedict	198,298	Dec. 18,1877	622	188	12	1051
Wagon-spring, Auxiliary	A. W. McKown	192,383	June 26,1877	924	277	11	1126
Wagon-spring, Auxiliary	A. W. McKown	192,775	July 3,1877	217	63	12	42
Wagon spring-seat	L. J. Bazzoni	195,561	Sept. 25,1877	831	247	12	542
Wagon, Steam road	G. W. Wade	189,977	Apr. 24,1877	1001	306	11	713
Wagon-step, Platform	C. Conderman	190,557	May 8,1877	458	135	11	814
Wagon-step, Platform	C. Conderman	191,030	May 22,1877	961	285	11	895
Wagon-top	H. W. Calderwood	189,840	Apr. 24,1877	869	265	11	696
Wagon top and cover	R. W. Thompson	194,061	Aug. 14,1877	281	83	12	279
Wagon-wheel	C. S. Tegnander	194,272	Aug. 14,1877	501	151	12	308
Wagons, Apparatus for unloading and elevating grain, bricks, &c., from.	A. M. McLeran	195,298	Sept. 18,1877	572	166	12	496
Wagons, Auxiliary spring for	A. W. McKoron	186,263	Jan. 16,1877	446	137	11	83
Wagons, Shoveling-board for	J. K. McLennan	196,986	Nov. 13,1877	268	79	12	806
Waiter-call or signal	G. R. Osborn and R. A. Drayton	190,511	May 8,1877	416	121	11	808
Wall-fender for furniture	S. B. Tizzard	197,690	Nov. 27,1877	1009	302	12	932
Wall-paper, Device for exhibiting	C. A. Sexton	187,675	Feb. 20,1877	756	234 235	11	322
Wall-pocket for stationery	E. Morgan	194,970	Sept. 11,1877	223	69	12	439
Wall-pocket for stationery	E. Morgan	194,971	Sept. 11,1877	223	69	12	439
Wall-protector and towel-rack, Combined	H. M. Hutchinson and M. V. Lunger.	186,132	Jan. 9,1877	315	96	11	59
Walls of houses, Facing for	T. Walton	188,417	Mar. 13,1877	492	153	11	452
Wardrobe	W. H. Harris	187,226	Feb. 13,1877	308	100	11	256
Wardrobe-hook, Labeled	T. F. Breese	191,645	June 5,1877	126	39	11	993
Wardrobe, Rotary	T. Weiss	187,207	Feb. 6,1877	267	87	11	238
Warming buildings, Street main or pipe for supplying large districts with heat for.	B. Holly	193,088	July 17,1877	562	169	12	101
Warming dwellings, &c., Meter-valve of apparatus for.	B. Holly	193,087	July 17,1877	561	168	12	104
Warp-eyes of wire heddles, Machine for forming the	A. J. Williams	195,194	Sept. 11,1877	453	135	12	472
Warp-regulator	W. Oothout	189,775	Apr. 17,1877	782	240	11	676
Warping yarn, Machine for	J. Cumnock	192,571	July 3,1877	15	5	12	14
Wash-basin	C. E. Yvelin	192,807	July 3,1877	253	74	12	46
Wash-bench	N. T. Scott	187,489	Feb. 20,1877	585	181	11	300
Wash-bench, Folding	G. W. Lengfield	194,829	Sept. 4,1877	74	24	12	411
Wash-board	D. M. Fisher and S. E. Warren	189,618	Apr. 17,1877	625	193	11	656
Wash-board	G. Gallup	194,595	Aug. 28,1877	839	250	12	370
Wash-board	D. I. George	187,842	Feb. 27,1877	946	294	11	356
Wash-board	J. M. Gorham	190,309	May 1,1877	194	57	11	771
Wash-board	S. A. Gould	186,722	Jan. 30,1877	921	285	11	197
Wash-board	J. Graves	192,254	June 19,1877	768	234	11	1004
Wash-board	D. E. Hall	195,214	Sept. 18,1877	487	144	12	485
Wash-board	J. H. Lapham	188,472	Mar. 20,1877	528	163	11	466
Wash-board	J. H. Lapham	193,095	July 17,1877	568	171	12	105
Wash-board	H. F. W. Liebmann	193,972	Aug. 7,1877	173	53	12	258
Wash-board	J. Poole	189,876	Apr. 24,1877	935	277	11	701
Wash-board	W. Serviss	188,681	Mar. 20,1877	722	221	11	493
Wash-board	T. M. Webb	186,912	Jan. 30,1877	1111	344	11	191
Wash-board attachment	G. W. Hunter	193,254	July 17,1877	724	221	12	126
Wash-board legs, Machine for making	W. F. Perryn	197,891	Dec. 4,1877	183	55,56	12	972
Wash-board legs, Machine for planing and grooving.	C. T. Brandon	195,204	Sept. 18,1877	477	141	12	483
Wash-boiler	H. Gotthardt	190,029	Apr. 24,1877	1062	323	11	721
Wash-boiler	T. Gunsalus	191,582	June 5,1877	66	20	11	985
Wash-boiler	W. A. Kellogg	193,163	July 17,1877	626	190	12	113
Wash-boiler	W. McIlvain	189,765	Apr. 17,1877	773	237	11	675
Wash-boiler	M. Tanenbaum	194,385	Aug. 21,1877	623	188	12	331
Wash-boiler attachment	C. Kamlah	189,742	Apr. 17,1877	749	230	11	672
Wash-bowl	W. H. Cloke	189,844	Apr. 24,1877	872	266	11	696
Wash-bowls, &c., Vent-clearer for	J. S. Hawley	186,206	Jan. 16,1877	398	121	11	77
Wash-stand	N. O. Bond	197,714	Dec. 4,1877	5	2	12	947
Wash-stand	C. C. Hall	193,369	July 24,1877	859	263	12	152
Wash-stand	J. P. Schwoikert	185,974	Jan. 2,1877	160	49	11	29
Wash-stand	L. Slater	189,662	Apr. 17,1877	666	206	11	662
Wash-stand and bureau, Combined	H. Mar	186,113	Jan. 9,1877	326	99 100	11	60
Wash-stand, Portable	N. O. Bond	189,597	Apr. 17,1877	603	186	11	653
Washer: *See* Barrel-washer. Ore-washer. Bottle-washer. Paper-pulp washer. Clothes-washer. Slate-washer. Dish-washer.							
Washer and amalgamator, Combined	B. Tyson	189,528	Apr. 10,1877	511	162	11	634
Washing-board	F. Taylor and H. F. Baker, jr.	193,570	July 24,1877	1054	316	12	178
Washing clothes, Composition for	R. B. Hurd	189,739	Apr. 17,1877	746		11	671
Washing light or finely-pulverized substances, Apparatus for.	J. B. Root	188,190	Mar. 6,1877	228	71	11	410
Washing-list indicator	H. E. Israel	189,740	Apr. 17,1877	746	229	11	672
Washing-machine	R. G. Baldwin and A. J. Parkhurst.	190,804	May 15,1877	718	213	11	856
Washing-machine	J. O. Beauperland	186,073	Jan. 9,1877	262	79	11	52
Washing-machine	J. O. Beauperland	198,504	Dec. 25,1877	835	253 254	12	1090
Washing-machine	G. W. Benton	191,916	June 12,1877	393	123	11	1033

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Washing-machine	D. Best	191,301	May 29, 1877	1233	370	11	941
Washing-machine	C. W. Bouser	194,406	Aug. 21, 1877	643	193, 194	12	334
Washing-machine	D. R. Bowling	194,408	Aug. 21, 1877	646	194	12	335
Washing-machine	N. A. Briggs and E. H. Knowles	193,802	Aug. 7, 1877	7	2	12	235
Washing-machine	J. H. Brown	190,278	May 1, 1877	165	48	11	767
Washing-machine	G. Buchanan	196,427	Oct. 23, 1877	775	224	12	695
Washing-machine	E. C. Cady and J. W. Wolfe	193,480	July 24, 1877	959	292	12	167
Washing-machine	J. H. Calvert	194,576	Aug. 28, 1877	823	245	12	367
Washing-machine	H. Carpenter	189,841	Apr. 24, 1877	870	265	11	696
Washing-machine	R. Chartrey	190,552	May 8, 1877	454	134	11	813
Washing-machine	C. S. Clark	186,801	Jan. 30, 1877	998	310	11	177
Washing-machine	W. I. Clous	195,803	Oct. 2, 1877	108	32	12	576
Washing-machine	P. H. Cooney	188,596	Mar. 20, 1877	638	197	11	482
Washing-machine	A. M. Cornelius	196,139	Oct. 16, 1877	484	140	12	645
Washing-machine	D. Croushorn and W. McBee	189,612	Apr. 17, 1877	618	191	11	655
Washing-machine	J. K. Cummings	195,096	Sept. 11, 1877	355	107	12	457
Washing-machine	S. L. Denney	189,343	Apr. 10, 1877	339	199	11	611
Washing-machine	C. A. Dodge	195,105	Sept. 11, 1877	363	109	12	458
Washing-machine	C. A. Dodge	195,106	Sept. 11, 1877	364	110	12	459
Washing-machine	H. C. Fager and H. J. Godwin	194,812	Sept. 4, 1877	57	19	12	408
Washing-machine	W. W. Goodwin	188,735	Mar. 27, 1877	786	241	11	510
Washing-machine	J. C. and G. H. Gove	187,617	Feb. 20, 1877	704	218	11	316
Washing-machine	J. C. Graunan	194,144	Aug. 14, 1877	381	113	12	291
Washing-machine	F. N. Griffith	192,330	June 26, 1877	871	263	11	1119
Washing-machine	E. L. Hancock	189,730	Apr. 17, 1877	736	226	11	670
Washing-machine	H. N. Harrington and M. Stoddard.	196,799	Nov. 6, 1877	62	19	12	769
Washing-machine	A. S. Hart	186,727	Jan. 30, 1877	924	287	11	168
Washing-machine	O. G. Hays	194,431	Aug. 21, 1877	674	201	12	337
Washing-machine	B. F. Henry	195,364	Sept. 18, 1877	629	187	12	505
Washing-machine	I. Hoagland	198,242	Dec. 18, 1877	577	174	12	1044
Washing-machine	J. W. Horn	193,957	Aug. 7, 1877	155	48	12	256
Washing-machine	J. H. Jeffrey	197,275	Nov. 20, 1877	579	171	12	860
Washing-machine	C. R. Jenne and W. Creighton	193,090	July 17, 1877	564	169	12	104
Washing-machine	W. Johnson	190,764	May 15, 1877	690	203	11	851
Washing-machine	J. B. Jones	195,288	Sept. 18, 1877	564	164	12	495
Washing-machine	O. Jurden	195,512	Sept. 25, 1877	790	233	12	535
Washing-machine	F. M. Karr	185,933	Jan. 2, 1877	127	37	11	24
Washing-machine	J. Kiehle	188,470	Mar. 20, 1877	526	162	11	466
Washing-machine	A. P. Ladd	191,865	June 12, 1877	348	107	11	1027
Washing-machine	J. B. Lauffer	188,381	Mar. 13, 1877	426	133	11	444
Washing-machine	D. R. Leach	195,027	Sept. 11, 1877	282	86	12	447
Washing-machine	S. E. Leigh	188,382	Mar. 13, 1877	427	133	11	444
Washing-machine	M. C. Longarre	186,142	Jan. 9, 1877	325	99	11	60
Washing-machine	G. D. Luce	188,524	Mar. 20, 1877	576	178	11	473
Washing-machine	E. McBride	189,481	Apr. 10, 1877	470	148, 149	11	628
Washing-machine	T. E. McDonald	198,205	Dec. 18, 1877	522	161	12	1037
Washing-machine	D. Miller	189,319	Apr. 10, 1877	321	101	11	608
Washing-machine	D. W. Miller	187,036	Feb. 6, 1877	116	38	11	218
Washing-machine	J. W. Modlin	187,038	Feb. 6, 1877	117	39	11	218
Washing-machine	W. Morehouse	197,158	Nov. 13, 1877	444	131	12	833
Washing-machine	H. C. Mulhollen and D. E. Goldsmith.	197,791	Dec. 4, 1877	87	27	12	958
Washing-machine	J. Myers	186,431	Jan. 23, 1877	642	196	11	120
Washing-machine	M. B. Nauss	193,718	July 31, 1877	1219	365	12	212
Washing-machine	S. Needles	192,705	July 3, 1877	154	43	12	34
Washing-machine	J. G. Oesterlo	197,488	Nov. 27, 1877	808	241	12	903
Washing-machine	J. M. Overshiner and T. Shannon	198,039	Dec. 11, 1877	335	104	12	1004
Washing-machine	H. G. Robertson	190,371	May 1, 1877	251	75	11	779
Washing-machine	M. W. Robinson	190,723	May 15, 1877	653	194	11	847
Washing-machine	C. K. Rogers	186,499	Jan. 23, 1877	704	216	11	128
Washing-machine	L. Rivers	195,953	Oct. 9, 1877	275	78	12	607
Washing-machine	I. Scoville and P. Bartlett	197,229	Nov. 20, 1877	534	158	12	853
Washing-machine	T. E. Smithback	193,732	July 31, 1877	1231	369	12	214
Washing-machine	E. Smith	187,989	Mar. 6, 1877	33	8	11	385
Washing-machine	H. E. Smith	195,176	Sept. 11, 1877	438	130	12	469
Washing-machine	J. C. Smith	197,803	Dec. 4, 1877	97	30	12	959
Washing-machine	G. Snell and D. J. McDermott	186,891	Jan. 30, 1877	1091	338	11	189
Washing-machine	L. Sternberger	192,027	June 12, 1877	507	155	11	1048
Washing-machine	C. Stevenson	187,194	Feb. 6, 1877	257	84	11	237
Washing-machine	R. Talmadge	190,386	May 1, 1877	271	80	11	781
Washing-machine	J. Taylor	188,695	Mar. 20, 1877	736	226	11	495
Washing-machine	S. F. Todd and J. G. Sinsley	188,205	Mar. 6, 1877	244	76	11	412
Washing-machine	J. St. Tonge	191,902	June 12, 1877	381	118	11	1031
Washing-machine	H. N. Tucker	186,902	Jan. 30, 1877	1100	341	11	190
Washing-machine	G. H. Waldo	187,994	Mar. 6, 1877	39	10	11	385
Washing-machine	W. W. Walker	188,448	Mar. 13, 1877	493	153	11	453
Washing-machine	H. Weizel	194,492	Aug. 21, 1877	736	219	12	346
Washing-machine	P. L. West	194,750	Aug. 28, 1877	986	292	12	390
Washing-machine and churn combined	W. H. Clarke and W. Collins	195,259	Sept. 18, 1877	537	156	12	491
Waste-can, Rawhide	A. Holbrook	193,656	July 31, 1877	1168	349	12	294
Waste-pipe trap	G. W. La Baw	195,137	Sept. 11, 1877	394	119	11	453
Waste-pipe trap	J. L. Turner	197,301	Nov. 20, 1877	601	179	12	863
Waste-water pipes, Preventing the freezing of	J. S. McMurtrie	186,862	Jan. 30, 1877	1068	330	11	185
Waste-way plug	J. H. Keyser and W. Turton	190,768	May 15, 1877	693	204	11	852
Watch	E. G. Boynett	192,222	June 19, 1877	728	222	11	1089
Watch	J. R. Hopkins	186,838	Jan. 30, 1877	1041	321, 322	11	182
Watch	R. Whittaker	197,068	Nov. 13, 1877	349	103	12	818
Watch-barrels, Mainspring attachment for	E. H. Flint	195,268	Sept. 18, 1877	546	159	12	492
Watch-case spring	A. N. Clarke	196,786	Nov. 6, 1877	48	15	12	767
Watch-case spring	D. C. Voss	196,609	Oct. 30, 1877	976	284	12	734

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Watch-cases, Manufacture of	F. Ecanbert	187,753	Feb. 27, 1877	853	266	11	344
Watch-chain bar	W. S. Hicks	187,851	Feb. 27, 1877	954	296	11	357
Watch-chain bar and button-hook, Combined	W. S. Hicks	190,488	May 8, 1877	393	114	11	805
Watch-dial fastening	L. Van Doren	196,726	Oct. 30, 1877	1091	317	12	750
Watch dust-band	O. Hoyt	195,711	Oct. 2, 1877	21	6	12	704
Watch dust-cap	G. Hunter	191,967	June 12, 1877	449	139	11	1041
Watch dust-cap	L. D. Merrill	190,233	May 1, 1877	117	34	11	761
Watch-escapement	N. Meyers	186,598	Jan. 23, 1877	799	247	11	141
Watch-escapement	J. Thomson	194,744	Aug. 28, 1877	980	291	12	389
Watch-escapement	J. Thomson	197,430	Nov. 20, 1877	734	220	12	884
Watch-glass	E. and W. Schlegel	187,180	Feb. 6, 1877	245	80	11	236
Watch-key	G. W. Harris	191,338	May 29, 1877	1261	380	11	945
Watch-key	G. Havell	194,904	Sept. 4, 1877	146	46	12	420
Watch-key	D. D. Smith	195,542	Sept. 25, 1877	814	241	12	539
Watch-regulator	J. Thomson	197,687	Nov. 27, 1877	1007	301	12	932
Watch, Repeating	A. L. Janod-Pattus	187,305	Feb. 13, 1877	389	124	11	367
Watch, Stem winding and setting	H. M. Robettom	196,252	Oct. 16, 1877	595	172	12	660
Watch-winding device	W. H. Bracy	189,600	Apr. 17, 1877	606	188	11	654
Watch-winding device	W. H. Zinn	195,687	Sept. 25, 1877	951	284	12	559
Watches, Hair-spring stud for	F. M. Martin	190,230	May 1, 1877	114	33	11	761
Watches, Lever winding and setting attachment for	H. Abbott	193,312	July 24, 1877	804	247	12	145
Watches, Making lift-springs for	A. S. Buckelew	186,107	Jan. 9, 1877	293	88	11	56
Watches, Micrometer-regulator for	C. V. Woerd	197,710	Nov. 27, 1877	1048	314	12	936
Watches, Plate for stem-winding	C. S. Moseley	185,867	Jan. 2, 1877	51	16	11	15
Watches, Roller-abstractor for	B. Frese	189,307	Apr. 10, 1877	306	96	11	606
Watches, Stem-winding device for	J. Thomson	197,686	Nov. 27, 1877	1006	300	12	932
Water and air closet	G. R. Moore	194,100	Aug. 14, 1877	318	94	12	284
Water and vapor bath and couch	J. W. Buell	197,327	Nov. 20, 1877	635	187	12	868
Water and wind wheel	A. Folsom	195,114	Sept. 11, 1877	372	112	12	460
Water and wine cooler	D. K. Enright	192,820	July 10, 1877	291	85	12	60
Water, &c., Apparatus for raising	J. J. Marçais	198,645	Dec. 25, 1877	967	295	12	1111
Water-channels, Preventing the obstruction of	L. H. Beebe	188,842	Mar. 27, 1877	903	275	11	526
Water-closet	J. R. Adams	194,982	Sept. 11, 1877	238	72	12	440
Water-closet	H. J. Bailey	188,492	Mar. 20, 1877	544	168	11	468
Water-closet	W. Blackwood, jr	187,089	Feb. 6, 1877	164	54	11	225
Water-closet	J. E. Boyle	187,251	Feb. 13, 1877	334	106	11	259
Water-closet	J. Demarest	195,705	Oct. 2, 1877	14	4	12	563
Water closet	N. Folsom	196,792	Nov. 6, 1877	52	16	12	768
Water-closet	G. Jennings	189,441	Apr. 17, 1877	747	230	11	672
Water-closet	F. E. Kernochan	193,410	July 24, 1877	895	273	12	157
Water-closet	G. R. Kuhn	187,540	Feb. 20, 1877	630	196	11	306
Water-closet	J. C. Kupferle and P. White	189,562	Apr. 17, 1877	568	176, 177	11	649
Water-closet	M. J. McEwan	187,545	Feb. 20, 1877	634	197	11	366
Water-closet	F. Pohley	189,782	Apr. 17, 1877	788	242	11	677
Water-closet	H. C. Price	195,397	Sept. 18, 1877	662	196	12	510
Water-closet	A. B. Seymour	192,021	June 12, 1877	502	154	11	1047
Water-closet	M. Sulzbacher	196,721	Oct. 30, 1877	1086	815	12	749
Water-closet	M. Sulzbacher and C. E. Yvelin	198,433	Dec. 18, 1877	750	227	12	1070
Water-closet	J. Zane	190,178	May 1, 1877	68	19	11	755
Water-closet basin	C. Harrison	188,897	Mar. 27, 1877	956	292	11	533
Water-closet bowl, Ventilated	H. Ogden	187,408	Feb. 13, 1877	487	152	11	280
Water-closet bowls, Drip-tray for	C. Harrison	197,629	Nov. 27, 1877	958	284, 285	12	924
Water-closet hopper and seat	W. G. Rhoads	196,388	Oct. 23, 1877	745	215	12	690
Water-closet protector	B. R. Brown	190,187	May 1, 1877	77	21	11	756
Water-closet, &c., seat	J. J. Weeks	187,437	Feb. 13, 1877	520	161	11	284
Water-closet, &c., valve	J. E. Boyle	193,800	Aug. 7, 1877	5	2	12	235
Water-closet valve	S. Eckert	192,642	July 3, 1877	91	27	12	24
Water-closet valve	M. F. Gale	190,304	May 1, 1877	189	56	11	770
Water-closet valve	P. Magnus	197,037	Nov. 13, 1877	319	95	12	814
Water-closet valve	J. Muirhead	193,271	July 17, 1877	743	227	12	128
Water-closet valve	J. H. Quinn	197,662	Nov. 27, 1877	986	294	12	928
Water-closet valve	R. J. Thomas	189,908	Apr. 24, 1877	935	285	11	705
Water-closets, Disinfecting apparatus and safety-seat for	J. H. Peterson	198,675	Dec. 25, 1877	998	303	12	1114
Water-closets, Effluvia-ejector for	W. Smith	190,919	May 15, 1877	828	245	11	870
Water-closets, Porcelain bowl for	C. Harrison	196,798	Nov. 6, 1877	61	18	12	769
Water-closets, Service-box for	R. Mitchell	189,947	Apr. 24, 1877	970	297	11	710
Water closets, Trunk for	E. A. Leland	186,352	Jan. 16, 1877	548	166	11	95
Water-distributer	J. H. Rhodes	185,965	Jan. 2, 1877	153	47	11	28
Water-elevator	T. Gamble and J. Wagner	190,845	May 15, 1877	756	234	11	861
Water-elevator	C. E. Lykke	189,761	Apr. 17, 1877	770	236	11	674
Water-elevator	A. Vantrump	188,988	Mar. 27, 1877	1043	321	11	545
Water-elevator	A. Wright	187,339	Feb. 13, 1877	423	133	11	272
Water-elevator bucket	I. Coppock	197,830	Dec. 4, 1877	124	38	12	963
Water-elevator, Compressed-air	D. C. Cregier	195,800	Oct. 2, 1877	105	31	12	576
Water-elevator, Steam	W. Dotey	194,809	Sept. 4, 1877	55	18	12	408
Water-elevator, Windlass	T. B. Barber	198,263	Dec. 18, 1877	594	180	12	1047
Water-elevator, Windlass	R. T. Stokes	197,296	Nov. 20, 1877	597	177	12	863
Water-engine	J. S. W. Johnson	189,627	Apr. 17, 1877	631	195	11	657
Water-engine	H. W. Woodbury and W. Wood	197,987	Dec. 11, 1877	988	88, 89	12	996
Water from running streams, Apparatus for raising	S. Lindsey	197,737	Dec. 4, 1877	32	11	12	950
Water-gage	C. D. Smith	191,724	June 5, 1877	199	63	11	1004
Water-gate	D. T. Perkins	196,474	Oct. 23, 1877	825	238	12	701
Water, grain, &c., elevator	L. Gallaher	196,348	Oct. 23, 1877	705	203	12	684
Water-heater	W. Dootson	187,605	Feb. 20, 1877	688	214	11	314
Water-meter	A. R. Arnold	190,536	May 8, 1877	436	128	11	811
Water-meter	J. H. Connell	191,031	May 22, 1877	962	285	11	895
Water-meter	H. B. Hayes	192,990	July 10, 1877	447	134	12	82
Water-meter	J. Johnson	197,859	Dec. 4, 1877	150	46	12	961
Water-meter	W. Park	187,233	Feb. 13, 1877	316	102	11	257
Water-meter	G. O. Schneller	196,483	Oct. 23, 1877	835	241	12	702
Water-meter	D. P. Weir	196,958	Nov. 6, 1877	227	67	12	792

Alphabetical list of inventions—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
				Spec.	Dr'g.	Vol.	Page.
Water-meter	P. Wells	188,214	Mar. 6, 1877	250	78	11	413
Water-meter	P. Wells	188,215	Mar. 6, 1877	251	78	11	413
Water meter or engine	W. Smith	190,920	May 15, 1877	829	246	11	870
Water-meter, Piston	A. C. Austin	197,988	Dec. 11, 1877	288	89	12	996
Water-meter, Piston	J. H. Coombs	194,549	Aug. 28, 1877	800	238	12	364
Water-meter, Piston	G. Fajen	198,539	Dec. 25, 1877	865	263	12	1095
Water-meter, Rotary	H. C. Abrbecker	196,411	Oct. 23, 1877	763	220	12	693
Water-meter, Rotary	J. P. Simons and G. Wallace	194,183	Aug. 14, 1877	418	126	12	297
Water-meter, Rotary	J. H. Swartz	197,949	Dec. 11, 1877	247	77	12	990
Water-motor	K. L. Mills	185,946	Jan. 2, 1877	137	41	11	26
Water-motor	F. W. Tuerk, jr	197,954	Dec. 11, 1877	253	78	12	991
Water-pipe, Lateral	W. L. Church	186,411	Jan. 23, 1877	624	190	11	117
Water-power in sewers, Utilizing	L. Bargmann	197,589	Nov. 27, 1877	915	273	12	918
Water-power, Portable apparatus for obtaining	M. L. King	194,826	Sept. 4, 1877	72	23	12	410
Water-proof cellar-bottom	J. R. Anthony	195,471	Sept. 25, 1877	750	221	12	530
Water-raising apparatus	M. L. Fisher	186,003	Jan. 9, 1877	195	59	11	43
Water-regulator	L. A. Scowden	190,911	May 15, 1877	820	242	11	869
Water-supply pipe	C. L. Driesslein	196,745	Nov. 6, 1877	8	3	12	762
Water-tube and circulating steam-boiler	W. B. Glover	186,472	Jan. 23, 1877	683	209	11	125
Water-tube and circulating steam-boiler	W. Ord	186,494	Jan. 23, 1877	699	215	11	127
Water-tube boiler	E. Cope	191,225	May 29, 1877	1163	349	11	932
Water-tube boiler	C. Tyson	196,844	Nov. 6, 1877	107	32	12	776
Water-tube cap	R. P. Thompson	190,526	May 8, 1877	428	125	11	810
Water-wheel	J. S. Boddie, jr	189,547	Apr. 17, 1877	552	172	11	647
Water-wheel	J. J. Bourgeois	192,671	July 3, 1877	127	35	12	29
Water-wheel	L. D'Auria	190,012	Apr. 24, 1877	1044	318	11	719
Water-wheel	J. W. De Haven	194,897	Sept. 4, 1877	139	44	12	419
Water-wheel	G. W. Earl	196,344	Oct. 23, 1877	701	202	12	684
Water-wheel	L. Good	191,668	June 5, 1877	149	46	11	996
Water-wheel	J. Gothard	198,728	Dec. 25, 1877	1052	320	12	1122
Water-wheel	N. L. Greene	187,004	Feb. 6, 1877	88	30	11	213
Water-wheel	J. C. Horton	195,215	Sept. 18, 1877	488	144	12	485
Water-wheel	S. C. Humphreys	188,911	Mar. 27, 1877	969	296	11	535
Water-wheel	J. S. Ladow	193,454	July 24, 1877	937	285	12	164
Water-wheel	I. Mallery	191,605	June 5, 1877	88	26	11	988
Water-wheel	W. T. Reaser	190,970	May 22, 1877	899	{266 267	11	887
Water-wheel	S. Stearns and R. R. Ogden	192,304	June 19, 1877	826	251	11	1102
Water-wheel	A. B. Strand	188,979	Mar. 27, 1877	1033	318	11	544
Water-wheel	T. Tripp	189,970	Apr. 24, 1877	992	303	11	712
Water wheel and gate	J. W. Ross	188,960	Mar. 27, 1877	1018	313	11	542
Water-wheel, Overshot	S. L. Rose	192,286	June 19, 1877	799	243	11	1098
Water-wheel, Turbine	C. Barber	187,083	Feb. 6, 1877	159	53	11	224
Water-wheel, Turbine	J. M. Case	195,793	Oct. 2, 1877	97	29	12	575
Water-wheel, Turbine	M. V. Drake	187,833	Feb. 27, 1877	934	290	11	355
Water-wheel, Turbine	N. H. Gould	190,752	May 15, 1877	678	201	11	850
Water-wheel, Turbine	A. R. Guilder	192,691	July 3, 1877	143	40	12	32
Water-wheel, Turbine	B. D. Holmes	191,238	May 29, 1877	1175	352	11	933
Water-wheel, Turbine	J. Hough	190,038	Apr. 24, 1877	1071	326	11	792
Water-wheel, Turbine	W. R. Jenkins, jr	190,595	May 8, 1877	493	147	11	819
Water-wheel, Turbine	C. and C. O. Krogh	194,445	Aug. 21, 1877	689	206	12	340
Water-wheel, Turbine	J. Osborn and J. P. Lybarger	189,488	Apr. 10, 1877	477	151	11	628
Water-wheel, Turbine	J. H. Smith	191,379	May 29, 1877	1294	392	11	949
Water-wheel, Turbine	E. R. Stilwell	195,855	Oct. 2, 1877	164	46	12	584
Water-wheels, Combining and operating a series of turbine.	T. Welham	190,172	May 1, 1877	63	17	11	754
Waters, Apparatus for drawing still	E. R. Sibley	186,764	Jan. 30, 1877	960	298	11	172
Watering pot, Garden	E. Hunter	190,218	May 1, 1877	103	30	11	760
Weaning-bit for animals	J. P. Israel	186,347	Jan. 16, 1877	544	165	11	95
Weather-strip	H. Brightmann	187,997	Mar. 6, 1877	41	11	11	386
Weather strip	J. Chandler	186,079	Jan. 9, 1877	267	81	11	53
Weather-strip	W. H. Cosper	195,206	Sept. 18, 1877	480	142	12	483
Weather-strip	F. Davis	186,714	Jan. 30, 1877	915	283	11	166
Weather-strip	F. Davis	190,420	May 8, 1877	323	95	11	797
Weather-strip	J. H. Davis	194,296	Aug. 21, 1877	538	163	12	320
Weather-strip	M. and J. Frink	197,843	Dec. 4, 1877	137	41	12	965
Weather-strip	H. Gollings	193,602	July 31, 1877	1103	331	12	196
Weather-strip	D. O. Hink	186,085	Jan. 9, 1877	272	82	11	53
Weather-strip	G. Howver	190,039	Apr. 24, 1877	1072	326	11	722
Weather-strip	E. T. Ingalls	192,371	June 26, 1877	910	273	11	1125
Weather-strip	L. Johns and I. Falcon	188,017	Mar. 6, 1877	59	17	11	388
Weather-strip	W. C. Mathews	197,974	Dec. 11, 1877	277	84	12	994
Weather-strip	C. B. Rager	188,409	Mar. 13, 1877	453	141	11	448
Weather-strip	J. F. Rowlett	197,056	Nov. 13, 1877	339	100	12	817
Weather-strip	T. H. Tyson	194,387	Aug. 21, 1877	625	188	12	332
Weather-strip	E. C. Underwood	186,386	Jan. 16, 1877	589	180	11	100
Weather-strip	E. C. Underwood	186,508	Jan. 23, 1877	711	218	11	129
Weather-strip	A. F. Van Dolsen	196,318	Oct. 23, 1877	678	195	12	680
Weather-strip	M. W. Williams	195,863	Oct. 2, 1877	173	49	12	585
Wedge, Metal	J. Kelly	188,376	Mar. 13, 1877	421	131	11	443
Weed-cutter	J. A. Lees	198,129	Dec. 11, 1877	428	134	12	1017
Weed-destroyer	J. A. Lees	189,238	Apr. 3, 1877	204	69	11	586
Weed-hider	G. H. McDonel, J. Thorn, and S. Ewing.	189,374	Apr. 10, 1877	368	119	11	615
Weeder, Garden	M. Johnson	197,731	Dec. 4, 1877	23	7	12	949
Weeder, Hand garden	M. Johnson	188,917	Mar. 27, 1877	974	298	11	536
Weighing attachment for hand-trucks	D. A. Beam	194,983	Sept. 11, 1877	239	73	12	440
Weighing device	F. H. Lindsley	197,938	Dec. 11, 1877	237	73	12	988
Weighing liquids, Apparatus for	J. G. Valentine	190,262	May 1, 1877	146	43	11	765
Weighing samples of grain, Device for	F. Fairbanks	198,364	Dec. 18, 1877	682	208	12	1060
Weight-motor	J. M. Cayce	191,930	June 12, 1877	408	127	11	1035
Welding and finishing chain-links	B. Hershey	193,083	July 17, 1877	545	165	12	102
Welding Bessemer-steel rails	O. W. Meysenburg	188,396	Mar. 13, 1877	443		11	446

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Welding chain-links, Die for	J. Haley	197,123	Nov. 13, 1877	411	121	12	827
Welding chain-links, Die for	J. H. Helm	192,827	July 10, 1877	300	87	12	61
Welding chain-links, Die for	J. Schinneller and L. Fitzpatrick	188,545	Mar. 20, 1877	592	183	11	475
Welding chain-links, Machine for	J. H. Helm	193,608	July 31, 1877	1109	332 and 333	12	197
Welding chain-links, Machine for	B. Hershey	193,084	July 17, 1877	547	165	12	103
Welding furnace, Tube	W. B. Sandford	189,579	Apr. 17, 1877	587	182	11	652
Welding furnaces, Attachment to tube	C. Tolmie	187,937	Feb. 27, 1877	1037	319	11	368
Welding links, Die for	J. H. Helm	193,607	July 31, 1877	1108	332	12	197
Welding machine, Tube	J. French	194,593	Aug. 28, 1877	837	249	12	369
Welding metal tubes, Machine for	W. S. Sutherland	194,502	Aug. 21, 1877	745	222	12	547
Welding metal tubing, Machine for	H. C. Evans	193,400	July 24, 1877	886	271	12	156
Well, Bored	R. A. Ryrie	190,624	May 8, 1877	528	157	11	823
Well boring and drilling machine	A. Burdick	194,547	Aug. 28, 1877	798	238	12	364
Well-boring apparatus	J. Haas and J. Manning	196,009	Oct. 9, 1877	331	94	12	616
Well-boring apparatus	C. B. Hewitt	196,526	Oct. 30, 1877	899	260	12	722
Well-boring apparatus	C. H. Robinson	193,348	July 24, 1877	837	256	12	150
Well-boring apparatus	W. W. Vaughn and S. Jackson	198,058	Dec. 11, 1877	351	109	12	1006
Well-boring machinery	J. Bennerscheidt	198,182	Dec. 18, 1877	497	154	12	1033
Well-boring, Temper-screws for use in	D. McLean and J. Herverk	193,771	July 31, 1877	1272	382	12	220
Well heater, Oil	J. Odell	185,951	Jan. 2, 1877	141	42	11	27
Well machinery, Stirrups for oil	F. A. Segerdahl	193,423	July 24, 1877	910	276	12	159
Well tubes, Device for perforating artesian	J. M. Creal	197,105	Nov. 13, 1877	395	116	12	825
Well-wall cleaner, Oil	M. T. McCormick	188,746	Mar. 27, 1877	797	244	11	512
Wells, Apparatus for and process of extracting casings from oil and other.	W. T. Baum and A. Shidel	197,538	Nov. 27, 1877	865	257	12	911
Wells, Apparatus for walling	A. Moore	186,943	Feb. 6, 1877	30	12	11	206
Wells, Automatic casing-spear for oil	F. J. Fox	197,841	Dec. 4, 1877	135	41	12	965
Wells, Boiler for oil	D. C. Brawley	194,215	Aug. 14, 1877	443	135	12	300
Wells, Boiler for oil	D. C. Brawley	196,625	Oct. 30, 1877	987	288	12	736
Wells, Combined tube-clamp and wrench for sustaining the lining of artesian.	H. M. Bradley	193,595	July 31, 1877	1097	329	12	195
Wells, Device for lining	W. Dunton and J. L. Simkins	198,583	Dec. 25, 1877	900	275	12	1101
Wells, Device for lowering fluids into oil	S. A. and I. N. Fithian	194,667	Aug. 28, 1877	901	269	12	379
Wells, Machine for drilling oil	J. Stengel	196,717	Oct. 30, 1877	1083	314	12	748
Wells, Machinery for drilling oil and other artesian	C. Swan	188,316	Mar. 13, 1877	358	112 and 113	11	434
Wells, Operating signal-lantern for oil	E. E. Swett	188,204	Mar. 6, 1877	243	76	11	412
Wells, Packed casing-head for oil	J. Conlan	198,489	Dec. 25, 1877	820	248	12	1089
Wells, &c., Sand-trap for artesian or driven	J. T. Sell	195,051	Sept. 11, 1877	308	93	12	450
Wells, Steaming oil	A. J. West	193,838	Aug. 7, 1877	41	13	12	240
Wells, Temper-screw for artesian	K. Kugler	188,251	Mar. 13, 1877	295	93	11	426
Wells, Tool-carrying truck for boring oil	H. T. Blackwell	194,325	Aug. 21, 1877	572	171	12	324
Wells, Tube-cutter for oil	H. Harris	194,149	Aug. 14, 1877	386	114	12	292
Wells, Tubing and casing oil	D. L. Lewis and W. Boynton	188,806	Mar. 27, 1877	868	264	11	521
Wells, Valve-cup for oil	A. D. Westbrook	194,279	Aug. 14, 1877	509	154	12	309
Welt-trimmer	W. R. Barton	186,524	Jan. 23, 1877	726	224	11	131
Wheat-cracking machine	M. Grant and J. J. Henry	198,605	Dec. 25, 1877	926	282	12	1105
Wheat separating and cleaning machine	G. Moutague	186,041	Jan. 9, 1877	232	69	11	48
Wheel: *See* Ball-wheel. Car-wheel. Current-wheel. Emery-wheel. Endless-track wheel. Fifth-wheel. Fly-wheel. Friction-wheel. Gear-wheel. Grinding-wheel. Locomotive traction-wheel. Loose-rim wheel. Padale-wheel. Propelling-wheel. Railway-wheel. Tide-wheel. Traction-wheel. Truck, caster, &c., wheel. Turbine wheel. Vehicle-wheel. Wagon-wheel. Water-wheel. Wind-wheel. Wind and water wheel.							
Wheel and axle	J. Humphrey	191,286	May 29, 1877	1221	366	11	939
Wheel-brake	B. B. Hotchkiss	186,565	Jan. 23, 1877	765	236	11	136
Wheels, Casting	T. Tayler	198,707	Dec. 25, 1877	1026	312	12	1119
Wheelbarrow	C. W. Rose	194,179	Aug. 14, 1877	415	124	12	296
Wheelbarrow	W. H. Stevens	196,945	Nov. 6, 1877	215	64	12	790
Wheelbarrow	A. J. Upham	198,475	Dec. 25, 1877	805	244	12	1087
Wheelbarrow	E. W. Walker	191,735	June 5, 1877	210	66	11	1005
Wheelbarrow and garden-cultivator, Combined	J. D. O'Callaghan	186,606	Jan. 23, 1877	807	249	11	142
Wheelbarrow, Metal	C. and C. Nutting, jr	187,549	Feb. 20, 1877	637	198	11	307
Whiffletree	A. E. Brockett	194,985	Sept. 11, 1877	240	73	12	441
Whiffletree	A. Hayes	194,148	Aug. 14, 1877	385	114	12	292
Whiffletree	C. D. Smith	192,662	July 3, 1877	117	32	12	28
Whiffletree attachment	J. D. Lane	189,474	Apr. 10, 1877	465	146	11	627
Whiffletree attachment	J. J. Pancoast	193,776	July 31, 1877	1276	383	12	220
Whiffletree-coupling	H. R. Porter	198,042	Dec. 11, 1877	337	105	12	1004
Whiffletree coupling-plate	J. Ives	196,155	Oct. 16, 1877	496	144	12	646
Whiffletree eye-bolt	C. S. Ells	191,411	May 29, 1877	1324	402	11	953
Whiffletree fastening	S. M. Hamblin	191,235	May 29, 1877	1173	351	11	933
Whiffletree-hook	N. M. Bowen	193,798	Aug. 7, 1877	3	1	12	235
Whiffletree-hook	H. H. Hill	190,489	May 8, 1877	393	115	11	805
Whiffletree-hook	N. Y. Shaw	190,913	May 15, 1877	823	243	11	869
Whiffletree hook and clip	J. C. Coonley	190,007	Apr. 24, 1877	1037	316	11	718
Whiffletree hook and clip	J. C. Coonley	190,008	Apr. 24, 1877	1038	316	11	718
Whiffletree hook and clip	W. D. Ewart and J. C. Coonley	190,019	Apr. 24, 1877	1050	320	11	720
Whiffletree-iron	J. Irvine	188,912	Mar. 27, 1877	970	296	11	535
Whiffletree spring	A. Assman	186,405	Jan. 23, 1877	619	189	11	117
Whiffletree-spring	A. B. King	194,554	Aug. 28, 1877	804	239	12	365
Whiffletree, Trussed	S. W. Belles	187,086	Feb. 6, 1877	162	53	11	225
Whiffletrees, &c., Connecting-link for	G. W. Martin	195,940	Oct. 9, 1877	265	74	12	606
Whip	O. Breckenridge	192,617	July 3, 1877	64	19	12	21
Whip	G. E. and S. D. Ely	193,399	July 24, 1877	885	271	12	156

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Whip	A. F. Gerald	193,864	Aug. 7, 1877	62	20	12	243
Whip	F. Hopkins	193,872	Aug. 7, 1877	69	22	12	244
Whip	W. H. Millikin	192,447	June 26, 1877	982	295	11	1134
Whip	G. P. Overin	189,954	Apr. 24, 1877	976	299	11	710
Whip	A. Scharff	187,916	Feb. 27, 1877	1019	314	11	365
Whip and cane handle	W. H. Rice	196,827	Nov. 6, 1877	89	28	12	773
Whip and rein holder	G. C. Eastman	195,590	Sept. 25, 1877	861	256	12	546
Whip-lashes, Machine for twisting	G. A. Martin	189,637	Apr. 17, 1877	639	198	11	658
Whip-socket	G. F. Brinkerhoff	188,336	Mar. 13, 1877	377	118	11	437
Whip-socket	W. Cal'away	185,892	Jan. 2, 1877	79	24	11	18
Whip-socket	D. A. Kimbark	194,096	Aug. 14, 1877	315	93	13	284
Whip-socket	J. Lowth	192,269	June 19, 1877	783	238	11	1096
Whip-socket	G. P. Rose	195,536	Sept. 25, 1877	808	239	12	538
Whip-socket	J. H. Sunderman	193,100	July 17, 1877	574	173	12	106
Whip-socket	M. S. Tarkington	193,568	July 24, 1877	1052	315	12	178
Whip-socket and line-holder	A. Smith	196,942	Nov. 6, 1877	214	63	12	790
Whip-socket and rein-holder	G. P. Rose	195,170	Sept. 11, 1877	432	129	12	469
Whip-socket fastening	G. E. Hendey	198,021	Dec. 11, 1877	319	98	12	1001
Whips, Machine for fitting sidings for	M. E. Moore	189,569	Apr. 17, 1877	576	179	11	650
Whips, Machine for rolling	E. F. Woodbury	187,995	Mar. 6, 1877	39	10	11	386
Whips, &c., Rawhide cap for	W. J. Morand	194,612	Aug. 28, 1877	853	254	12	372
Wick-raiser	W. H. Smith	186,960	Feb. 6, 1877	47	16	11	208
Wick-raiser	W. N. Weeden	193,581	July 24, 1877	1065	319	12	180
Wind and water wheel	E. Manley	188,020	Mar. 6, 1877	61	18	11	388
Wind-instrument, Automatic	E. P. Needham	191,460	May 29, 1877	1376	415	11	960
Wind-wheel	J. A. Allen	188,563	Mar. 20, 1877	608	188	11	478
Wind-wheel	A. J. Cobb	189,700	Apr. 17, 1877	703	217	11	666
Wind wheel	E. Howland and J. B. Sweetland	185,924	Jan. 2, 1877	114	34	11	23
Wind-wheel	E. Howland and J. B. Sweetland	188,139	Mar. 6, 1877	171	52	11	403
Wind-wheel	J. Lowry and D. Hunt	196,685	Oct. 30, 1877	1050	305	12	743
Wind-wheel	G. W. Penn and W. S. Sharpnack	187,900	Feb. 27, 1877	999	309	11	363
Wind-wheel	J. P. Preston	192,933	July 10, 1877	394	117	12	74
Wind-wheel	S. Rittenhouse	187,672	Feb. 20, 1877	753	234	11	322
Wind-wheel and water-power, Combined	A. Snook	196,128	Oct. 16, 1877	473	137	12	643
Wind-wheel, Horizontal	R. W. Burt	194,988	Sept. 11, 1877	242	74	12	441
Wind-wheels, Automatic governor for	O. P. McDonald	188,747	Mar. 27, 1877	798	244	11	512
Wind-wheels, Mechanism for obtaining reciprocating motion from.	D. Bull	188,000	Mar. 6, 1877	43	12	11	386
Windlass	T. W. Hyde	192,263	June 19, 1877	778	236	11	1095
Windlass	F. S. Manton	188,925	Mar. 27, 1877	981	301	11	537
Windlass	F. S Manton	197,039	Nov. 13, 1877	322	95	12	814
Windlass and capstan attachment	T. J. Southard	197,501	Nov. 27, 1877	823	245	12	905
Windlass beams, Variable-power	D. Knowlton	189,751	Apr. 17, 1877	759	233	11	673
Windlass-bitt	F. S. Manton	197,040	Nov. 13, 1877	323	95	12	814
Windlass, Combined power and hand	F. E. Sickles	188,425	Mar. 13, 1877	468	145	11	449
Windlass deck-pipe	F. S. Manton	197,041	Nov. 13, 1877	323	96	12	814
Windlass, Portable	D. Janssen	190,594	May 8, 1877	493	147	11	819
Windlass, Ship's	G. M. Patten	193,458	July 24, 1877	942	286	12	164
Windmill	A. M. Abbott	196,065	Oct. 16, 1877	397	115	12	633
Windmill	W. G. Alexander	192,668	July 3, 1877	125	34	12	29
Windmill	L. H. Bennett	191,299	May 29, 1877	1231	370	11	941
Windmill	D. Bull	187,351	Feb. 13, 1877	432	136	11	273
Windmill	W. T. Burrows	188,853	Mar. 27, 1877	914	278	11	527
Windmill	J. Clark	197,457	Nov. 27, 1877	779	232	12	899
Windmill	G. R. Comstock	189,302	Apr. 10, 1877	298	95	11	605
Windmill	E. A. Dana	187,256	Feb. 13, 1877	339	108	11	260
Windmill	E. A. Dana	188,236	Mar. 13, 1877	283	88, 89	11	424
Windmill	E. H. Earle	190,296	May 1, 1877	181	54	11	769
Windmill	W. H. Evans	198,453	Dec. 25, 1877	783	238	12	1084
Windmill	H. C. Fallin	197,260	Nov. 20, 1877	563	{166 167}	12	857
Windmill	O. B. and L. A. Fuller	194,140	Aug. 14, 1877	378	112	12	291
Windmill	A. B. Funk and S. Miller	186,822	Jan. 30, 1877	1019	316	11	180
Windmill	T. B. Gray and J. D. Knox	196,524	Oct. 30, 1877	897	259	12	722
Windmill	W. D. Griffith	190,429	May 8, 1877	332	97	11	798
Windmill	W. A. Guzeman	192,502	June 26, 1877	1034	311	11	1141
Windmill	D. Halladay	190,430	May 8, 1877	333	98	11	798
Windmill	C. C. Harris	185,826	Jan. 2, 1877	13	5	11	10
Windmill	M. S. Hodges	193,954	Aug. 7, 1877	153	47	12	255
Windmill	N. Holden	195,131	Sept. 11, 1877	390	117	12	463
Windmill	M. L. Howard	194,822	Sept. 4, 1877	68	22	12	410
Windmill	J. J. Kimball	198,302	Dec. 18, 1877	625	189	12	1051
Windmill	R. R. Lander	198,029	Dec. 11, 1877	325	101	12	1002
Windmill	J. Lochhead	188,743	Mar. 27, 1877	794	243	11	511
Windmill	J. Neshitt	191,168	May 22, 1877	1087	325	11	912
Windmill	W. D. Nichols	187,297	Feb. 13, 1877	380	{120 121}	11	266
Windmill	D. Nysewander	189,132	Apr. 3, 1877	103	27	11	573
Windmill	I. H. Palmer	192,931	July 10, 1877	392	117	12	74
Windmill	I. H. Palmer	194,839	Sept. 4, 1877	82	27	12	412
Windmill	W. Peck	192,787	July 3, 1877	228	66	12	43
Windmill	J. J. Reed	197,796	Dec. 4, 1877	92	28	12	959
Windmill	M. P. Rhoades and J. A. J. Tricklo	192,598	July 3, 1877	42	12	12	18
Windmill	S. Rittenhouse	193,728	July 31, 1877	1227	368	12	213
Windmill	E. S. Smith	197,948	Dec. 11, 1877	247	77	12	990
Windmill	E. Stata	189,146	Apr. 3, 1877	117	42	11	575
Windmill	J. B. Stingley and H. Nelson	194,565	Aug. 28, 1877	813	242	12	366
Windmill	D. C. Stover	193,354	July 24, 1877	842	258	12	150
Windmill	G. S. Strong	194,314	Aug. 21, 1877	558	168	12	322
Windmill	J. Warwick and W. S. Marshall	190,937	May 15, 1877	849	{251 252}	11	872
Windmill	J. G. Watson	187,435	Feb. 13, 1877	518	160	11	284
Windmill	L. H. Wheeler, jr	187,440	Feb. 13, 1877	524	162	11	284
Windmill	W. H. Wheeler	187,439	Feb. 13, 1877	522	161	11	284

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Windmill	W. A. Williams	190,802	May 15, 1877	717	212	11	855
Windmill attachment	J. Smith	187,058	Feb. 6, 1877	135	44	11	221
Windmills, Tower for	J. S. Adams	187,078	Feb. 6, 1877	153	51	11	223
Window-blind	J. Miller	189,125	Apr. 3, 1877	98	35	11	572
Window-bracket	J. F. Zimmerman	192,727	July 3, 1877	169	49	12	36
Window-catch and burglar-alarm, Combined	H. B. Schureman	196,256	Oct. 16, 1877	601	173	12	661
Window-cleaner	W. C. Gayton	196,006	Oct. 9, 1877	328	93	12	615
Window-cornice	A. Michel	187,662	Feb. 20, 1877	746	231	11	321
Window frame and sash, Ventilating	A. K. Phillips	195,772	Oct. 2, 1877	76	23	12	572
Window-jack	D. M. Pfautz	190,615	May 8, 1877	515	153	11	822
Window-light, Tinted	P. E. Sloan	192,843	July 10, 1877	315	92	12	63
Window-screen	R. Calhoun	189,080	Apr. 3, 1877	62	23	11	567
Window-screen	W. Flood	189,720	Apr. 17, 1877	723	222	11	669
Window-screen	F. A. Gilbert	192,982	July 10, 1877	440	132	12	81
Window-screen	H. D. Osgood	187,894	Feb. 27, 1877	995	308	11	362
Window-screen	E. P. Pomeroy	192,875	July 10, 1877	345	101	12	67
Window-screen	G. and F. H. Saxton	193,349	July 24, 1877	837	257	12	150
Window-screen	E. C. Underwood	192,200	June 19, 1877	704	216	11	1086
Window-screen	J. C. Walker	191,206	May 22, 1877	1127	337	11	918
Window-screen	J. S. Wilson	196,548	Oct. 30, 1877	922	267	12	726
Window-screen, Adjustable	S. Roebuck	191,473	May 29, 1877	1389	419	11	961
Window screen and awning	S. Colahan	188,724	Mar. 27, 1877	774	237	11	509
Window-shade	F. J. Becker	197,009	Nov. 13, 1877	289	85	12	809
Window-shade roller	J. R. Smyth	192,663	July 3, 1877	118	32	12	28
Window, Ventilating bulk	M. W. and J. Ferguson	192,245	June 19, 1877	756	231	11	1093
Window-ventil tor	T. W. Bracher	195,335	Sept. 18, 1877	605	178	12	501
Window-ventilator	J. W. Browne	193,638	July 31, 1877	1146	342	12	202
Window-washer	G. G. Clark	192,566	July 3, 1877	10	3	12	14
Window-washer and garden-sprinkler	W. Westlake	187,496	Feb. 20, 1877	591	183	11	301
Window with blind and screen, Double	E. Boyden and A. D. Warren	196,186	Oct. 16, 1877	826	{152 153}	12	651
Windows, Device for preventing the accumulation of frost and steam upon store.	C. S. Anthony and J. Manheim	190,533	May 8, 1877	434	127	11	811
Wines, Manufacture of prune	W. Thompson	193,298	July 17, 1877	772		12	132
Wire and rod fabrics, Joint for	M. J. Stark	194,541	Aug. 28, 1877	793	236	12	363
Wire, Apparatus for pickling	C. D. Rogers	186,956	Feb. 6, 1877	42	15	11	207
Wire-barbing machine	D. C. Stover	188,436	Mar. 13, 1877	478	{148 149}	11	451
Wire-coiling machine	A. D. Hoffman	190,139	May 1, 1877	25	7	11	750
Wire-coiling machine	W. F. Moody	197,789	Dec. 4, 1877	86	26	12	958
Wire-cutter	J. Johnson	191,153	May 22, 1877	1073	321	11	941
Wire draw-plate	J. W. Cameron	190,195	May 1, 1877	83	23	11	157
Wire-drawing machine	C. D. Rogers	187,732	Feb. 27, 1877	832	259	11	341
Wire-drawing machine	J. S. Wilson	196,963	Nov. 6, 1877	230	69, 70	12	792
Wire fabric	H. R. Van Eps	189,529	Apr. 10, 1877	515	162	11	634
Wire-looping machine	O. D. and E. C. Woodbury and S. H. Cole.	190,265	May 1, 1877	149	43, 44	11	765
Wire, Machine for scaling, cleaning, and polishing	N. Betz	197,242	Nov. 20, 1877	547	162	12	855
Wire, Machine for twisting b ibed	E. P. Peacock	187,306	Feb. 13, 1877	391	124	11	367
Wire, Process and apparatus for electroplating	W. Wallace and L. L. Smith	189,533	Apr. 10, 1877	520	164	11	635
Wire rod, Machine for ro ling	W. W. McCallip	196,371	Oct. 23, 1877	727	209	12	687
Wire rope, Machine for making	N. Van Loom	187,943	Feb. 27, 1877	1041	320	11	369
Wire rope, Splicing	H. Channon	190,823	May 15, 1877	738	218	11	858
Wire stand for books, cards, &c	E. P. Woods and G. D. Dudley	194,394	Aug. 21, 1877	631	190	12	332
Wire, Straightening and coating	J. L. Haigh	190,319	May 1, 1877	202	60	11	772
Wire straightening and cutting machine	I. A. Kilmer	192,437	June 26, 1877	971	{291 292}	11	1133
Wire-stretcher	W. Z. Dafoe	192,572	July 3, 1877	16	5	12	14
Wire-stretcher	M. Davenport and M. H. Hicks	189,846	Apr. 24, 1877	872	266	11	697
Wire-stretcher	C. F. Roth	196,830	Nov. 6, 1877	92	28	12	774
Wire-stretcher	D. A. Smith	196,392	Oct. 23, 1877	748	216	12	691
Wired tickets, Machine for making	H. Van Geusen	192,778	July 3, 1877	243	71	12	45
Wood and coal box	A. Stantz	196,052	Oct. 9, 1877	374	106	12	622
Wood-drying apparatus	P. Pfeffer	192,001	June 12, 1877	481	148	11	1044
Wood, Inlaying	J. Thornton and J. Thallon	186,180	Jan. 9, 1877	363	111	11	65
Wood, &c., Ornamenting	W. Sutherland	185,843	Jan. 2, 1877	29		11	12
Wood-polisher	G. Zimmer	194,947	Sept. 4, 1877	191	58	12	426
Wood-polishing machine	A. Bridgman and J. L. Perry	188,589	Mar. 20, 1877	624	193	11	480
Wood, &c., Preserving	H. N. Regé, E. Poret, P. H. Baffoy, and P. S. E. Dupré.	191,257	May 29, 1877	1192		11	935
Wood-preserving apparatus and process	I. Hayford	194,773	Sept. 4, 1877	17	5	12	403
Wood-pressing machine	S. L. Nagle	191,704	June 5, 1877	181	57	11	1001
Wood, Splitting and bundling	O. Roelcke	195,651	Sept. 25, 1877	918	273	12	554
Wood-worker's float	C. M. Hyer	194,967	Sept. 11, 1877	221	68	12	439
Wood-working machine	C. J. Hardee	193,331	July 24, 1877	822	252	12	147
Wood-working machinery, Safety-trap for chip-carriers in.	D. C. Newell	193,774	July 31, 1877	1275	383	12	220
Wooden box	W. P. Coburn	192,815	July 10, 1877	287	84	12	59
Wooden box	G. Harrington	191,236	May 29, 1877	1173	352	11	933
Wooden box	F. Zuenkler	195,871	Oct. 2, 1877	179	51	12	586
Wooden boxes, Making	W. Huey	190,590	May 8, 1877	488	145	11	818
Wooden house	J. R. Perry	186,950	Feb. 6, 1877	36	14	11	207
Wooden pins, Machine for making	A. R. Sprout	193,428	July 24, 1877	914	278	12	160
Wooden rods and dowel-pins, Machine for making	H. B. Smith and J. Saltar, jr	189,510	Apr. 10, 1877	495	{156 157}	11	631
Wool-burring machine	E. Trombly	185,988	Jan. 2, 1877	172	53	11	31
Wool-combing machine	L. Smith	192,352	June 26, 1877	893	268	11	1122
Wool-combing machine	R. S. B. Thornton	197,805	Dec. 4, 1877	99	30	12	960
Wool-drier	F. Moore	197,487	Nov. 27, 1877	807	241	12	903
Wool, &c., Machine for cleansing	O. Lowe	188,385	Mar. 13, 1877	431	134	11	444
Wool picking and burring machine	C. G. and F. G. Sargent	194,110	Aug. 14, 1877	345	{103 104}	12	187
Wool, Process and apparatus for treating mineral	A. D. Ebers	191,524	June 5, 1877	14	4	11	978
Wool-rinsing machine	B. Hall	197,548	Nov. 27, 1877	875	260	12	912

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Wool, Separating vegetable matter from	G. Sirtaine	196,257	Oct. 16, 1877	602	174	12	661
Wool to render it less brittle for paper, &c., Treating artificial mineral.	A. D. Elbers	195,889	Oct. 9, 1877	207		12	599
Wool, Treating mineral	A. D. Elbers	194,422	Aug. 21, 1877	662		12	336
Wool-washing machine	J. Bachelder	198,557	Dec. 25, 1877	879	268	12	1098
Wool-washing machine	J. H. Knowles, J. K. Proctor, and F. P. Pendleton.	187,643	Feb. 20, 1877	727	225 226	11	319
Work-bench	G. M. Rathbun	187,558	Feb. 20, 1877	645	201	11	308
Work-box	W. Huntress	188,518	Mar. 20, 1877	571	176	11	472
Work-stand, Folding	E. G. Gollner	194,816	Sept. 4, 1877	61	20	12	409
Woven fabrics, Finishing	J. Short	190,786	May 15, 1877	706	209	11	854
Woven fabrics, Manufacture of	E. Posselt	191,255	May 29, 1877	1190		11	935
Wrench: *See* Bit-brace wrench. Carriage-wrench. Coach-wrench. Monkey-wrench. Pipe-wrench. Pipe and nut wrench. Ratchet-wrench. Screw-wrench. Tap-wrench.							
Wrench	A. S. Bunker	187,703	Feb. 27, 1877	806	250	11	338
Wrench	P. Chapin, sr	186,197	Jan. 16, 1877	392	119	11	76
Wrench	A. G. Coes	189,366	Apr. 10, 1877	361	116	11	614
Wrench	L. Coes	186,033	Jan. 2, 1877	225	67	11	47
Wrench	L. Coes	187,034	Jan. 2, 1877	226	67	11	47
Wrench	L. Coes	188,285	Mar. 13, 1877	326	103	11	430
Wrench	C. A. Corman	197,459	Nov. 27, 1877	780	233	12	899
Wrench	C. H. Covell	197,253	Nov. 20, 1877	559	165	12	857
Wrench	H. Davis	190,959	May 22, 1877	890	263	11	886
Wrench	W. Dicks	186,925	Feb. 6, 1877	5	2	11	203
Wrench	J. A. Dodge	188,605	Mar. 20, 1877	646	200	11	483
Wrench	J. Eiseman	195,266	Sept. 18, 1877	546	158	12	492
Wrench	S. C. Englund	191,412	May 29, 1877	1324	402	11	953
Wrench	J. B. Fox	189,352	Apr. 10, 1877	348	112	11	612
Wrench	W. D. Gold	188,243	Mar. 13, 1877	289	91	11	425
Wrench	B. F. Joslyn	192,920	July 10, 1877	383	113	12	72
Wrench	G. Kettlewell	198,544	Dec. 25, 1877	869	265	12	1096
Wrench	E. A. Leland	187,287	Feb. 13, 1877	368	118	11	264
Wrench	A. B. Lipsey	193,667	July 31, 1877	1177	353	12	206
Wrench	J. P. Mitchell	191,010	May 22, 1877	942	279	11	892
Wrench	O. B. North	186,155	Jan. 9, 1877	336	103	11	62
Wrench	H. Richards	186,954	Feb. 6, 1877	40	15	11	207
Wrench	L. E. Robinson	195,403	Sept. 18, 1877	668	198	12	510
Wrench	S. E. Robinson	198,685	Dec. 25, 1877	1007	306	12	1116
Wrench	J. Shepard	188,968	Mar. 27, 1877	1025	315	11	543
Wrench	J. H. Snyder	193,566	July 24, 1877	1051	315	12	178
Wrench	L. S. Starrett	190,636	May 8, 1877	540	161	11	825
Wrench	A. V. Trust	191,493	May 29, 1877	1412	426	11	964
Wrench and pipe-cutter, Combined	B. Donohue	195,589	Sept. 25, 1877	860	256	12	546
Wrench and vise, Combined	H. T. Gates	198,291	Dec. 18, 1877	617	187	12	1050
Wringer: *See* Clothes-wringer.							
Wringer	E. Banfield	193,135	July 17, 1877	603	182	12	110
Wringer	M. A. Caldwell	193,688	July 31, 1877	1195	358	12	208
Wringer	M. N. Lovell	198,493	Dec. 25, 1877	823	249	12	1089
Wringer	M. N. Lovell	198,494	Dec. 25, 1877	824	250	12	1089
Wringer	L. Sternberger	189,278	Apr. 3, 1877	251	83	11	591
Wringer and mangle	C. A. Mallory	188,387	Mar. 13, 1877	434	135	11	445
Wringer-roll	J. Greacen, jr	192,577	July 3, 1877	23	7	12	15
Wringing-machine	R. G. Baldwin and A. J. Parkhurst.	193,682	July 31, 1877	1190	356	12	208
Wringing-machine	N. B. Phelps	194,171	Aug. 14, 1877	407	122	12	295
Wristband-clasp	A. V. Sanford	190,626	May 8, 1877	530	157	11	824
Writing-fluid	J. M. Taylor	189,813	Apr. 17, 1877	816		11	681
Writing, Inking perforated	A. E. Hix	192,624	July 3, 1877	70	21	12	22
Writing instrument, Combination	C. H. Trask	196,270	Oct. 16, 1877	616	177	12	662
Y.							
Yarn, Composition for dressing cotton	W. H. Perkins	195,532	Sept. 25, 1877	805		12	538
Yarn-drying machine	M. P. Meissner, H. E. Römer, and F. R. Anke.	190,609	May 8, 1877	507	151	11	821
Yarn, Machine for sizing and beaming	J. Bullough	187,597	Feb. 20, 1877	679	212	11	313
Yarn, &c., winding machine	H. G. Warburton	197,912	Dec. 4, 1877	206	62	12	975
Yoke adjuster, Neck	J. Dalton	197,254	Nov. 20, 1877	559	165	12	857
Yoke, Horse	J. Boyer	193,316	July 24, 1877	808	248	12	145
Yoke, Metal neck	W. H. Johnson	186,425	Jan. 23, 1877	636	194	11	119
Yoke, Neck	F. Hannig	195,006	Sept. 11, 1877	258	79	12	443
Yoke, Neck	H. H. Hartzell	196,011	Oct. 9, 1877	333	94	12	616
Yoke, Neck	G. W. Hurd	190,435	May 8, 1877	329	99	11	799
Yoke ring and pulley, Neck	S. M. Palmer	195,840	Oct. 2, 1877	145	41	12	582
Yoke ring, Neck	C. Shuman	187,920	Feb. 27, 1877	1023	315	11	366
Yokes, Device for shaping clip	M. Seward	190,629	May 8, 1877	532	158	11	824
Z.							
Zinc, Preparing sheet	A. O'Neill	190,071	Apr. 24, 1877	1109	337	11	727

ALPHABETICAL LIST OF DESIGNS.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
A.					
Advertising-ball	E. E. Sage	10,162	Aug. 21, 1877	12	313
Advertising-card	J. D. Holt	10,152	Aug. 14, 1877	12	270
Advertising-desk	J. H. Frink	9,711	Jan. 16, 1877	11	70
B.					
Badge	J. McCoy	9,918	Apr. 17, 1877	11	642
Badge	A. Schwartz	10,333	Nov. 27, 1877	12	891
Badge	R. O. Wood	10,054	June 12, 1877	11	1012
Ball-room favor	M. Keppler	9,868	Mar. 27, 1877	11	504
Bas-relief	G. Beck	9,917	Apr. 17, 1877	11	642
Basket, Hanging	W. Hamilton	10,165	Aug. 28, 1877	12	353
Billiard-table	C. Schulenburg	10,025	May 29, 1877	11	927
Book-case	J. W. Schnckers	10,046	June 5, 1877	11	973
Book-cover	J. Becker	10,144	Aug. 7, 1877	12	229
Boot and shoe	J. Pienovi	10,384	Dec. 25, 1877	12	1078
Bottle	A. T. Francis and C. H. Royce	9,703	Jan. 16, 1877	11	70
Bottle	E. Raynand	9,916	Apr. 17, 1877	11	642
Bottle, Druggists'	J. H. Harrison	10,034	June 5, 1877	11	973
Bracelet	C. H. Graff	10,049	June 12, 1877	11	1012
Bracelet	J. Hackenberg	10,159	Aug. 21, 1877	12	313
Bracelet	H. Lang	10,265	Oct. 2, 1877	12	5
Bracelet	M. Sternheimer	10,026	May 29, 1877	11	927
Bronze, Ornamenting	J. W. Tiemann, W. Simpson, jr., and J. Collins.	9,709	Jan. 16, 1877	11	70
Buckle	W. F. Osborne	10,323	Nov. 20, 1877	12	843
Burial-casket	A. Clark	10,270	Oct. 9, 1877	12	36
Burial-casket	A. H. Nirdlinger	9,864	Mar. 20, 1877	11	460
Burial-casket	W. M. Reid	10,321	Nov. 20, 1877	12	843
Burial-casket	W. M. Reid	10,362	Dec. 18, 1877	12	1027
Burial-casket handle	W. M. Smith	10,357	Dec. 18, 1877	12	1027
Butter-cooler	B. T. Steinhardt	10,122	July 17, 1877	12	139
Button	A. H. Carou	10,259	Sept. 25, 1877	12	519
Button or stud	O. P. Coggeshall	10,047	June 12, 1877	11	1012
Button, stud, &c	J. W. and I. M. Miller	10,100	July 17, 1877	12	95
Buttons, Card of	J. Fenton	9,905–9,906	Apr. 17, 1877	11	642
C.					
Can	E. Norton	9,767	Feb. 27, 1877	11	332
Card-basket	P. Rosenbach	10,130	July 24, 1877	12	139
Card, Playing	V. C. Clayton	10,250	Sept. 18, 1877	12	478
Card, Playing	A. J. Manning	10,099	July 17, 1877	12	95
Card-rack	P. Rosenbach	10,004	May 22, 1877	11	880
Card, Show	W. C. Wilson and T. S. Harrison	10,269	Oct. 2, 1877	12	5
Cards, Back of playing	A. J. Manning	10,238-10,247	Sept. 11, 1877	12	432
Cards, Clip for suspending	G. W. McGill	10,320	Nov. 20, 1877	12	843
Cards, Pack of playing	J. H. Bingham	9,859	Mar. 20, 1877	11	460
Carpet	F. E. Allen	10,009	May 29, 1877	11	926
Carpet	F. E. Allen	10,263	Oct. 2, 1877	12	5
Carpet	A. Baye	9,745	Feb. 20, 1877	11	291
Carpet	A. Baye	9,874–9,876	Apr. 3, 1877	11	854
Carpet	A. Baye	9,903	Apr. 17, 1877	11	642
Carpet	A. Baye	10,095	July 17, 1877	12	95
Carpet	J. H. Bromley	9,893	Apr. 10, 1877	11	601
Carpet	J. H. Bromley	10,132	July 31, 1877	12	190
Carpet	J. Campbell	10,012	May 29, 1877	11	926
Carpet	J. Campbell	10,363-10,367	Dec. 25, 1877	12	1078
Carpet	E. Daniel	9,851–9,852	Mar. 13, 1877	11	421
Carpet	E. Daniel	9,880	Apr. 3, 1877	11	854
Carpet	E. Daniel	9,920–9,921	Apr. 24, 1877	11	690
Carpet	E. Daniel	9,957	May 8, 1877	11	790
Carpet	E. Daniel	10,071	June 26, 1877	11	1114
Carpet	E. Daniel	10,285	Oct. 23, 1877	12	669
Carpet	E. Daniel	10,315	Nov. 20, 1877	12	843
Carpet	W. De Hart	9,720–9,722	Jan. 30, 1877	11	154
Carpet	W. De Hart	10,169-10,170	Aug. 28, 1877	12	354
Carpet	J. Fisher	10,102-10,107	July 17, 1877	12	139
Carpet	J. Fisher	10,368-10,379	Dec. 25, 1877	12	1078
Carpet	J. L. Folsom	10,173-10,194	Sept. 4, 1877	12	396
Carpet	H. F. Goetze	9,894	Apr. 10, 1877	11	601
Carpet	J. Hamer	9,994–9,997	May 22, 1877	11	880
Carpet	J. Hamer	9,999	May 22, 1877	11	880
Carpet	J. Hamor	10,148-10,150	Aug. 14, 1877	12	269
Carpet	J. Hamer	10,293-10,295	Nov. 6, 1877	12	757
Carpet	A. Heald	9,704–9,705	Jan. 16, 1877	11	70
Carpet	O. Heinigke	10,195-10,203	Sept. 4, 1877	12	396
Carpet	A. Hill	10,171	Aug. 28, 1877	12	354
Carpet	J. E. Hill and W. H. Deacon	9,723	Jan. 30, 1877	11	154
Carpet	H. Horan	10,204-10,217	Sept. 4, 1877	12	396
Carpet	H. S. Kerr	10,035-10,037	June 5, 1877	11	973
Carpet	A. Martin	10,279	Oct. 23, 1877	12	669

Alphabetical list of designs—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Carpet	D. McNair	9,706	Jan. 16, 1877	11	70
Carpet	D. McNair	10,166	Aug. 28, 1877	12	373
Carpet	D. McNair	10,355	Dec. 18, 1877	12	1027
Carpet	J. Neil	10,002	May 22, 1877	11	880
Carpet	E. J. Ney	10,109-10,120	July 17, 1877	12	139
Carpet	H. Nordman	10,218	Sept. 4, 1877	12	396
Carpet	W. A. Pardoe	10,280	Oct. 23, 1877	12	669
Carpet	G. W. Piggott	10,219-10,220	Sept. 4, 1877	12	396
Carpet	J. E. Rollings	10,221-10,223	Sept. 4, 1877	12	396
Carpet	J. H. Smith	10,224	Sept. 4, 1877	12	396
Carpet	W. H. Smith	10,225-10,228	Sept. 4, 1877	12	396
Carpet	T. J. Stearns	9,699	Jan. 9, 1877	11	40
Carpet	T. J. Stearns	9,707-9,708	Jan. 16, 1877	11	70
Carpet	T. J. Stearns	9,752-9,753	Feb. 20, 1877	11	291
Carpet	T. J. Stearns	9,768	Feb. 27, 1877	11	332
Carpet	T. J. Stearns	9,853	Mar. 13, 1877	11	421
Carpet	T. J. Stearns	10,005	May 22, 1877	11	880
Carpet	T. J. Stearns	10,038-10,039	June 5, 1877	11	973
Carpet	T. J. Stearns	10,153-10,154	Aug. 14, 1877	12	270
Carpet	T. J. Stearns	10,168	Aug. 28, 1877	12	354
Carpet	T. J. Stearns	10,306-10,307	Nov. 6, 1877	12	957
Carpet	T. J. Stearns	10,356	Dec. 18, 1877	12	1027
Carpet	C. W. Swapp	10,123-10,128	July 17, 1877	12	139
Carpet	C. Ueter	9,726-9,728	Jan. 30, 1877	11	154
Carpet	C. Uster	10,172	Aug. 28, 1877	12	354
Carpeting	E. Fisher	9,771	Mar. 6, 1877	11	376
Carpeting	J. Fisher	9,772-9,783	Mar. 6, 1877	11	376
Carpeting	J. L. Folsom	9,784-9,795	Mar. 6, 1877	11	376
Carpeting	J. L. Folsom	9,922-9,931	Apr. 24, 1877	11	690
Carpeting	O. Heinigke	9,796-9,810	Mar. 6, 1877	11	376
Carpeting	O. Heinigke	9,932-9,935	Apr. 24, 1877	11	690
Carpeting	H. Horan	9,812-9,821	Mar. 6, 1877	11	376
Carpeting	H. Horan	9,936-9,940	Apr. 24, 1877	11	690
Carpeting	E. J. Ney	9,823-9,834	Mar. 6, 1877	11	376
Carpeting	H. Nordmann	9,835-9,838	Mar. 6, 1877	11	376
Carpeting	G. W. Piggott	9,942-9,943	Apr. 24, 1877	11	690
Carpeting	J. E. Rollings	9,944-9,946	Apr. 24, 1877	11	690
Carpeting	C. W. Swapp	9,840-9,842	Mar. 6, 1877	11	376
Carriage-top joint	G. F. Smith	8,690	Jan. 2, 1877	11	6
Casket-handle lug	C. Barmore	10,068	June 26, 1877	11	1114
Casket-molding	W. M. Smith	10,347	Dec. 11, 1877	12	982
Casket-screw	W. M. Smith	10,348	Dec. 11, 1877	12	982
Cassimere	F. S. Bosworth	10,082	July 3, 1877	12	7
Cassimere	D. D. Bowen	10,131	July 31, 1877	12	190
Cassimere	G. C. Burns	9,972	May 15, 1877	11	833
Cassimere	A. Carmichel	10,286-10,287	Oct. 30, 1877	12	717
Cassimere	O. F. Chase	10,069	June 26, 1877	11	1114
Cassimere	O. F. Chase	10,089	July 3, 1877	12	8
Cassimere	O. F. Chase	10,091	July 10, 1877	12	54
Cassimere	J. T. Fisko, jr	10,103	Aug. 28, 1877	12	353
Cassimere	C. F. Harrison	10,056	June 19, 1877	11	1062
Cassimere	T. Holmes	9,895	Apr. 10, 1877	11	601
Cassimere	H. A. Kimball	9,760-9,766	Feb. 27, 1877	11	332
Cassimere	J. Perry	10,135-10,136	July 31, 1877	12	190
Cassimere	W. B. Weeden	10,087	July 3, 1877	12	8
Cassimere, Fancy	F. S. Bosworth	9,892	Apr. 10, 1877	11	601
Cassimere, Fancy	F. S. Bosworth	10,010-10,011	May 29, 1877	11	926
Cassimere, Fancy	F. S. Bosworth	10,324	Nov. 27, 1877	12	891
Cassimere, Fancy	F. S. Bosworth	10,346	Dec. 11, 1877	12	982
Cassimere, Fancy	F. Carpenter	10,013	May 29, 1877	11	926
Cassimere, Fancy	O. F. Chase	10,326	Nov. 27, 1877	12	891
Cassimere, Fancy	T. Holmes	9,950-9,951	May 1, 1877	11	742
Cassimere, Fancy	C. Kimball	9,990	May 15, 1877	11	834
Cassimere, Fancy	H. A. Kimball	9,952-9,953	May 1, 1877	11	742
Cassimere, Fancy	P. McGeo	10,058	June 19, 1877	11	1062
Cassimere, Fancy	W. A. Walton	9,898	Apr. 10, 1877	11	601
Cassimere, Fancy	W. B. Weeden	9,900-9,901	Apr. 10, 1877	11	601
Cassimere for cloakings	H. A. Kimball	10,317-10,318	Nov. 20, 1877	12	843
Caster	A. H. Wirz	10,008	May 22, 1877	11	880
Center-piece	A. Carlewitz	10,055	June 19, 1877	11	1062
Center-piece	S. Kellett	9,846	Mar. 6, 1877	11	376
Center-piece	S. Kellett	10,160-10,161	Aug. 21, 1877	12	313
Center-piece	P. A. Stout	10,161	June 19, 1877	11	1062
Chain-link, Ornamental	K. F. Heckmann	10,289	Oct. 30, 1877	12	717
Chain, Ornamental	D. A. Beam	9,700-9,701	Jan. 16, 1877	11	70
Chain, Ornamental	G. F. Gleason	10,020	May 29, 1877	11	926
Chair	P. Diehl	9,904	Apr. 17, 1877	11	642
Chair and settee	H. F. Goodwin	9,887	Apr. 3, 1877	11	554
Chair and sofa	P. P. Kuehborth	10,252	Sept. 18, 1877	12	478
Chair-frame	A. G. Hofstatter	9,888	Apr. 3, 1877	11	554
Chair-frame	S. C. Hopkins	10,050	June 12, 1877	11	1012
Chimney and globe, Combined	E. D. Dithridge	10,251	Sept. 18, 1877	12	478
Cigar-box	G. Fuchs	10,275	Oct. 16, 1877	12	627
Cigar-box	S. Lowenthal	10,108	July 17, 1877	12	139
Cigar-box	J. Straiton and G. Storm	10,229	Sept. 4, 1877	12	396
Cigar-pipe	W. Demuth	10,018	May 29, 1877	11	926
Clock and mirror frame	H. J. Davies	9,993	May 22, 1877	11	880
Clock-case	H. J. Müller	9,969	May 8, 1877	11	790
Clock-case	H. J. Müller	10,094	July 10, 1877	12	54
Coffin-handle ear	R. H. Burr	9,973-9,974	May 15, 1877	11	833
Corset	M. Adler	9,712-9,713	Jan. 23, 1877	11	113
Corset	M. Adler	9,719	Jan. 30, 1877	11	154
Corset	M. Adler	9,873	Apr. 3, 1877	11	851
Corset-clasp eye	M. Adler	9,902	Apr. 17, 1877	11	642

Alphabetical list of designs—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Corset-gore	T. S. Gilbert	10,164	Aug. 28, 1877	12	353
Cradle	L. E. Minott	10,075	June 26, 1877	11	1114
Cuff	E. A. Litchfield	10,093	July 10, 1877	12	54
Cuff and collar box	A. N. Luchs	10,341	Dec. 11, 1877	12	981
D.					
Dessert-set	W. J. Miller	10,277	Oct. 16, 1877	12	627
Dinner, tea, and toilet set	E. Haviland	10,328	Nov. 27, 1877	12	891
Dinner, tea, and toilet set handle	E. Haviland	9,949	May 1, 1877	11	742
Directory board, Business	W. H. Thackeray	10,006	May 22, 1877	11	880
Dish	E. Boote	9,877	Apr. 3, 1877	11	854
Dish-handle	J. W. Burgess	10,234	Sept. 11, 1877	12	432
Dish-handle	J. W. Burgess	10,325	Nov. 27, 1877	12	891
Dish-handle	S. Stevens	10,268	Oct. 2, 1877	12	5
E.					
Easy-chair	F. Krayl	10,230	Sept. 4, 1877	12	396
Embroidery-pattern	E. Crisand	9,754–9,756	Feb. 20, 1877	11	291
Embroidery-pattern	E. Crisand	10,030-10,032	June 5, 1877	11	973
Embroidery pattern	E. Crisand	10,083	July 3, 1877	12	8
Embroidery-pattern	E. Crisand	10,138	Aug. 7, 1877	12	229
Embroidery-pattern	E. Crisand	10,236-10,237	Sept. 11, 1877	12	432
Embroidery-pattern	E. Crisand	10,255	Sept. 18, 1877	12	478
Embroidery-pattern	A. Donlevy	10,048	June 12, 1877	11	1012
Embroidery-pattern sheet	B. Dreyfuss and S. Sachs	9,740	Feb. 13, 1877	11	251
Eraser, India-rubber	C. B. Dickinson	9,746	Feb. 20, 1877	11	291
Eraser, India-rubber	F. Stith	10,053	June 12, 1877	11	1012
F.					
Fan	W. C. Macbrair	9,692	Jan. 9, 1877	11	40
Flower-pot bracket	O. F. Fogelstrand	9,702	Jan. 16, 1877	11	70
Flower-stand	H. P. Roberts	10,067	June 19, 1877	11	1063
Fountain, Drinking	J. W. Fiske	10,019	May 29, 1877	11	926
Fringe	E. Greasly	9,959	May 8, 1877	11	790
Fringe, Dress	M. Blan	9,919	Apr. 24, 1877	11	690
Funereal ornament	W. M. Smith	10,078	June 26, 1877	11	1114
G.					
Gas-fixture, Pendent	R. C. Baker	10,079	July 3, 1877	12	7
Gas, Instrument for regulating the pressure of	O. Pressprich	9,839	Mar. 6, 1877	11	376
Gasalier	R. C. Baker	10,080-10,081	July 3, 1877	12	7
Gate and fence	J. McLean	10,337	Dec. 4, 1877	12	942
Gate and rail, Iron	W. Tweeddale	10,155	Aug. 14, 1877	12	270
Glass jar	F. L. Bodine	9,860	Mar. 20, 1877	11	460
Glass jar	S. R. Pinckney	9,991	May 15, 1877	11	834
Glass shade	W. W. Lyman	10,134	July 31, 1877	12	190
Glassware	D. Barker	9,848	Mar. 13, 1877	11	421
Glassware	J. Jones	10,096	July 17, 1877	12	95
Glassware	J. Jones	10,296-10,297	Nov. 6, 1877	12	757
Glassware	J. B. Lyon	9,915	Apr. 17, 1877	11	642
Glassware	H. P. Pears	9,744	Feb. 13, 1877	11	251
H.					
Hassock-covering	C. H. Bartlett	10,233	Sept. 11, 1877	12	432
Hat and coat rack	J. R. Palmenberg	10,274	Oct. 16, 1877	12	627
Hat-block	J. Sealy	10,382	Dec. 25, 1877	12	1078
Hat-rack	L. E. Fish	10,309	Nov. 6, 1877	12	757
Head-comb	P. Cullinan	9,862	Mar. 20, 1877	11	460
Hinge	F. T. Fracker and L. Widmayer	9,882	Apr. 3, 1877	11	854
Hinge	E. J. Steele	10,308	Nov. 6, 1877	12	757
I.					
Inkstand	E. G. Cate	9,718	Jan. 23, 1877	11	113
Inkstand	J. B. Dobelmann	10,338	Dec. 11, 1877	12	981
Inkstand	O. F. Fogelstrand	9,845	Mar. 6, 1877	11	376
Inkstand and match-box	O. F. Fogelstrand	9,844	Mar. 6, 1877	11	376
Inkstand and match-safe	O. F. Fogelstrand	9,843	Mar. 6, 1877	11	376
Inkstand-base	B. Brower	10,278	Oct. 16, 1877	12	627
Insulator, Telegraph	J. M. Brookfield	9,858	Mar. 20, 1877	11	460
Insulator, Telegraph	J. M. Brookfield	9,956	May 8, 1877	11	790
J.					
Jewelry	J. W. and I. M. Miller	10,354	Dec. 18, 1877	12	1027
Jewelry	J. W. and I. M. Miller	10,383	Dec. 25, 1877	12	1078
Jewelry, Ornamental scroll-work for	L. Heckmann	10,288	Oct. 30, 1877	12	717
K.					
Knife, fork, and spoon handle	J. Seymour	9,854	Mar. 13, 1877	11	421
Knob, Door	L. Widmayer	10,029	May 29, 1877	11	927
L.					
Lace-fabric	A. G. Jennings	10,264	Oct. 2, 1877	12	5
Lace-fabric	J. Robinson	10,003	May 22, 1877	11	880
Lamp-bracket	A. D. Judd	9,989	May 15, 1877	11	834
Lamp chimney or globe	P. Zimmerman	10,254	Sept. 18, 1877	12	478

Alphabetical list of designs—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Lamp-holder	P. Kintz	9,724	Jan. 30, 1877	11	154
Level, Spirit	L. L. Davis	10,014-10,017	May 29, 1877	11	926
Licorice-stick	H. T. Jarrett, W. C. Conrad, and F. H. Renz.	9,741	Feb. 13, 1877	11	251
Liquor-flask	E. R. Lilienthal	10,085	July 3, 1877	12	8
Locket	F. Keller and C. Frey	9,941	Apr. 24, 1877	11	690
M.					
Match-box	F. Markoe	9,869	Mar. 27, 1877	11	504
Match-box	P. Rosenbach	9,725	Jan. 30, 1877	11	154
Match-holder	W. W. Lyman	9,822	Mar. 6, 1877	11	376
Match-holder and friction-match, Combined	P. L. Davis	9,770	Mar. 6, 1877	11	376
Match-safe	O. F. Fogelstrand	10,316	Nov. 20, 1877	12	843
Match-safe	W. Hamilton	10,151	Aug. 14, 1877	12	270
Match-safe	W. H. Matthai	10,086	July 3, 1877	12	8
Milk-jug	T. C. Smith	10,077	June 26, 1877	11	1114
Mirror-frame	J. Crawford	10,310	Nov. 13, 1877	12	798
Molding for door and window casings	R. M. Merrill and J. L. Pearson	10,040	June 5, 1877	11	973
Monument	A. M. Buchanan	10,088	July 3, 1877	12	8
Monument	J. Morgan	9,960-9,968	May 8, 1877	11	790
Monument	J. Morgan	10,023-10,024	May 29, 1877	11	927
Motto	J. W. Fleischmann	9,881	Apr. 3, 1877	11	854
N.					
Necklace	G. F. Gleason	9,883-9,886	Apr. 3, 1877	11	554
Necklace	H. W. Woods	9,955	May 1, 1877	11	742
O.					
Oil-cloth	J. Hutchison	9,889	Apr. 3, 1877	11	554
Oil-cloth	C. T. and V. E. Meyer	9,693-9,698	Jan. 9, 1877	11	40
Oil-cloth	C. T. and V. E. Meyer	9,747-9,751	Feb. 20, 1877	11	291
Oil-cloth	C. T. and V. E. Meyer	9,907-9,913	Apr. 17, 1877	11	642
Oil-cloth	C. T. and V. E. Meyer	10,041-10,044	June 5, 1877	11	973
Oil-cloth	C. T. and V. E. Meyer	10,064-10,066	June 19, 1877	11	1063
Oil-cloth	C. T. and V. E. Meyer	10,140-10,142	Aug. 7, 1877	12	229
Oil-cloth	C. T. and V. E. Meyer	10,272-10,273	Oct. 9, 1877	12	36
Oil-cloth	C. T. and V. E. Meyer	10,298-10,304	Nov. 6, 1877	12	757
Oil-cloth	C. T. and V. E. Meyer	10,329-10,331	Nov. 27, 1877	12	891
Oil-cloth	J. Meyer	10,167	Aug. 28, 1877	12	354
Organ-case	L. K. Fuller	9,958	May 8, 1877	11	790
Organ-case	S. Hayward	10,072-10,073	June 26, 1877	11	1114
Organ-case	J. R. Lomas	9,914	Apr. 17, 1877	11	642
Overshoe	A. S. Hubbard	9,988	May 15, 1877	11	834
P.					
Paper box	N. D. Bill	9,731	Feb. 6, 1877	11	198
Paper box	N. D. Bill	9,739	Feb. 13, 1877	11	251
Paper box	L. P. Heath	9,733	Feb. 6, 1877	11	198
Paper box	L. P. Heath	9,867	Mar. 27, 1877	11	504
Paper box	E. Morgan	9,689	Jan. 2, 1877	11	6
Paper, cards, and envelopes, Ornamenting writing	A. S. Alfred	9,970	May 8, 1877	11	790
Paper-weight	A. C. Smith, jr	9,737	Feb. 6, 1877	11	198
Parlor-table	P. P. Kuehborth	10,092	July 10, 1877	12	54
Pen and pencil holder	P. Schrag	9,870	Mar. 27, 1877	11	504
Pencil-case	J. D. Cobb	10,282	Oct. 23, 1877	12	669
Pencil-case	W. S. Hicks	10,260	Sept. 25, 1877	12	519
Pencils, Erasive head for lead	F. H. Holton	9,863	Mar. 20, 1877	11	460
Pendulum	E. Ingraham	10,340	Dec. 11, 1877	12	981
Piano case, Upright	S. Brambach	10,258	Sept. 25, 1877	12	519
Picture-exhibitor	J. W. Taft	9,865	Mar. 20, 1877	11	460
Picture-frame	J. J. Gray	9,732	Feb. 6, 1877	11	198
Picture-frame	R. C. Mitchell	10,059	June 19, 1877	11	1062
Picture-frame	E. Mulligan and J. H. Wood	10,253	Sept. 18, 1877	12	478
Picture-frame	L. Pattberg	10,121	July 17, 1877	12	139
Picture-frame	U. Racine	10,281	Oct. 23, 1877	12	669
Pocket-book clasp	L. Messer	10,051	June 12, 1877	11	1012
Pocket-book clasp	L. Messer	10,266	Oct. 2, 1877	12	5
Pocket-book fastener	L. Prahar	9,948	Apr. 24, 1877	11	690
Pottery or glass ware handle	T. Haviland	10,276	Oct. 16, 1877	12	627
Printed and woven fabric	W. Morris	10,231	Sept. 4, 1877	12	396
Printed and woven fabric	W. Morris	10,267	Oct. 2, 1877	12	5
Pump	O. Heinigke	10,000	May 22, 1877	11	880
R.					
Range	F. M. Lawrence	10,097	July 17, 1877	12	95
Range, Cooking	J. Beesley	9,729	Feb. 6, 1877	11	198
Range, Cooking	T. H. Roberts	10,060	June 19, 1877	11	1062
Range, Cooking	N. S. Vedder	10,248	Sept. 11, 1877	12	432
Range, Cooking	N. S. Vedder and T. S. Heister	10,344	Dec. 11, 1877	12	982
Rocking-chair frame	T. J. Palmer	10,332	Nov. 27, 1877	12	891
Rug	J. Hamer	9,998	May 22, 1877	11	880
S.					
Salver	A. Conradt	9,686	Jan. 2, 1877	11	5
Sash-holder	T. Overton	9,896	Apr. 10, 1877	11	601
Satchels, &c., Lock-case for	R. Flocke	10,033	June 5, 1877	11	973
Scales, Base for counter	F. W. Troomner	9,743	Feb. 13, 1877	11	251

Alphabetical list of designs—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Shade-ring	L. J. Atwood	9,971	May 15, 1877	11	833
Shears and scissors	M. Renz	10,101	July 17, 1877	12	95
Sheet-metal box	W. Wilkinson	10,007	May 22, 1877	11	880
Shirt-front	S. Weill	9,710	Jan. 16, 1877	11	70
Shoe	G. W. Meader	10,001	May 22, 1877	11	880
Shoe, Rubber	J. A. Olmstead	9,847	Mar. 6, 1877	11	376
Shoe, Rubber	J. Pienovi	9,759	Feb. 20, 1877	11	291
Shoes and other articles, Ornamenting	D. B. Moulton	10,261	Sept. 25, 1877	12	519
Show-card	J. C. White	10,028	Mar. 29, 1877	11	927
Sign	A. D. Smith	9,897	Apr. 10, 1877	11	601
Skate	E. H. Barney	10,380	Dec. 25, 1877	12	1078
Skirt-protector	R. Werner	9,716	Jan. 23, 1877	11	113
Sleigh-bell	A. A. Bevin	9,730	Feb. 6, 1877	11	198
Smoking-pipe cover	J. Kirschbaum	10,074	June 26, 1877	11	1114
Snap-hook	E. Kempshall	10,319	Nov. 20, 1877	12	843
Soap, Cake of	T. Worsley	9,717	Jan. 23, 1877	11	113
Soap, Imprint on bars of	N. W. Fisk	10,256	Sept. 18, 1877	12	478
Soda-water apparatus, Casing of	J. W. Tufts	10,137	July 31, 1877	12	190
Speaking-trumpet	E. Cairns	10,235	Sept. 11, 1877	12	432
Spice-caddy	E. Norton	10,305	Nov. 6, 1877	12	757
Spoon and fork handle	J. M. Culver	9,861	Mar. 20, 1877	11	460
Spoon, fork, &c	J. M. Culver	9,850	Mar. 13, 1877	11	421
Spoon, fork, &c., handle	S. H. Shiebler	10,262	Sept. 25, 1877	12	519
Spoons and table-cutlery, Handle of	G. Gill and E. L. Brittin	10,147	Aug. 14, 1877	12	269
Statuary, Group of	J. Rogers	10,052	June 12, 1877	11	1012
Statuary, Group of	J. Rogers	10,076	June 26, 1877	11	1114
Statuary, Group of	J. Rogers	10,336	Nov. 27, 1877	12	891
Step-plate	M. Krickl	10,349-10,351	Dec. 11, 1877	12	982
Stove	C. H. Castle	9,849	Mar. 13, 1877	11	421
Stove	J. Dyer	10,139	Aug. 7, 1877	12	229
Stove	W. A. King	9,714	Jan. 23, 1877	11	113
Stove	W. and G. D. Sanford	9,715	Jan. 33, 1877	11	113
Stove, Base-burning	N. S. Vedder and T. S. Heister	10,358-10,360	Dec. 18, 1877	12	1027
Stove, Box	N. S. Vedder and T. S. Heister	9,691	Jan. 2, 1877	11	6
Stove, Box	N. S. Vedder	10,342	Dec. 11, 1877	12	981
Stove, Cook	N. S. Vedder and F. Ritchie	10,027	May 29, 1877	11	927
Stove, Cooking	A. P. Corse	9,866	Mar. 27, 1877	11	504
Stove, Cooking	R. A. Culter and D. C. Proctor	9,758	Feb. 20, 1877	11	291
Stove, Cooking	O. B. Keeley	9,890	Apr. 3, 1877	11	555
Stove, Cooking	J. A. Lawson	10,143	Aug. 7, 1877	12	229
Stove, Cooking	G. Smith and H. Brown	9,871	Mar. 27, 1877	11	504
Stove, Cooking	N. S. Vedder	10,334	Nov. 27, 1877	12	891
Stove, Cooking	N. S. Vedder and T. S. Heister	10,335	Nov. 27, 1877	12	891
Stove, Franklin	N. S. Vedder and T. S. Heister	10,343	Dec. 11, 1877	12	982
Stove, Heating	R. A. Culter and D. C. Proctor	9,879	Apr. 3, 1877	11	854
Stove, Heating	R. A. Culter and D. C. Proctor	10,133	July 31, 1877	12	190
Stove, Heating	J. A. Lawson	10,084	July 3, 1877	12	8
Stove, Heating	J. A. Lawson	10,098	July 17, 1877	12	95
Stove, Heating	J. A. Lawson	10,129	July 17, 1877	12	139
Stove, Heating	N. S. Vedder and F. Ritchie	9,738	Feb. 6, 1877	11	198
Stove, Oil	W. Hailes and J. Gray	10,090	July 3, 1877	12	8
Stove or range, Cooking	G. Smith and H. Brown	9,872	Mar. 27, 1877	11	504
Stove, Parlor	N. S. Vedder, F. Ritchie, and T. S. Heister.	10,345	Dec. 11, 1877	12	982
Stove, Parlor oven	J. A. Lawson	10,353	Dec. 18, 1877	12	1027
Stove, Parlor wood	N. Brayer	10,249	Sept. 11, 1877	12	432
Stove, Vapor	E. F. Rogers	9,742	Feb. 13, 1877	11	251
Stud and button	J. W. and I. M. Miller	10,045	June 5, 1877	11	973
Sugar-bowl frame	F. Dunworth, J. H. Young, and J. A. Dunworth.	10,145	Aug. 7, 1877	12	229
Suitings, Pattern in	N. Frye	10,146	Aug. 14, 1877	12	269
Suitings, Pattern in	N. Frye	10,157-10,158	Aug. 21, 1877	12	313
T.					
Table-ware handle	J. A. Whalen	10,232	Sept. 4, 1877	12	396
Tack, Stair-carpet	M. Krickl	10,057	June 19, 1877	11	1062
Tassel	G. S. Hensel	10,021	May 29, 1877	11	926
Tea-pot, Basket	J. E. Jeffords	10,313	Nov. 13, 1877	12	798
Tobacco-bag	W. J. Cussen	10,063	June 19, 1877	11	1063
Tobacco-bag	W. J. Cussen	10,070	June 26, 1877	11	1114
Toilet-frame	E. W. and A. A. Hutchins	10,339	Dec. 11, 1877	12	981
Towel, &c	C. J. and R. T. Webb	10,322	Nov. 20, 1877	12	843
Towels, &c., Woven border for	R. T. Webb	9,856	Mar. 13, 1877	11	421
Towels, &c., Woven border for	R. T. Webb	9,899	Apr. 10, 1877	11	601
Towels, Woven border for	R. T. Webb	10,314	Nov. 13, 1877	12	798
Towels, &c., Woven border for the ends of	R. T. Webb	9,947	Apr. 24, 1877	11	690
Towels, Woven border for the ends of	R. T. Webb	9,954	May 1, 1877	11	742
Toy money-box	J. Fallows	10,327	Nov. 27, 1877	12	891
Traveling bag and satchel	W. Heller	9,687	Jan. 2, 1877	11	6
Trimming	A. Sturm	9,855	Mar. 13, 1877	11	421
Trimming	R. Werner	10,062	June 19, 1877	11	1062
Types, Font of ornamental printing	H. Brehmer	10,291	Nov. 6, 1877	12	757
Types, Font of ornamental printing	D. W. Bruce	10,290	Nov. 6, 1877	12	757
Types, Font of ornamental printing	J. Herriet	10,022	May 29, 1877	11	926
Types, Font of ornamental printing	J. Herriet	10,257	Sept. 18, 1877	12	478
Types, Font of ornamental printing	J. Herriet	10,292	Nov. 6, 1877	12	757
Types, Font of ornamental printing	J. Herriet	10,311	Nov. 13, 1877	12	798
Types, Font of printing	D. W. Bruce	9,857	Mar. 20, 1877	11	460
Types, Font of printing	W. F. Capitain	9,992	May 22, 1877	11	880
Types, Font of printing	J. M. Connor	9,878	Apr. 3, 1877	11	854
Types, Font of printing	J. Herriet	9,734	Feb. 6, 1877	11	198
Types, Font of printing	J. Herriet	9,811	Mar. 6, 1877	11	376
Types, Font of printing	H. Ihlenburg	9,735	Feb. 6, 1877	11	198

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Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette.	
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Types, Font of printing	A. Little	9,688	Jan. 2, 1877	11	6
Types, Font of printing	A. Little	10,352	Dec. 18, 1877	12	1027
U.					
Umbrella-handle	F. J. Kaldenberg	10,284	Oct. 23, 1877	12	669
V.					
Valve hand-wheel	A. H. Jerecki	10,283	Oct. 23, 1877	12	669
Vase	W. Tweeddale	9,769	Feb. 27, 1877	11	332
W.					
Wall-paper	C. Dresser	9,975–9,987	May 15, 1877	11	834
Wall-pocket	D. Raup	10,156	Aug. 14, 1877	12	270
Wall-pocket	M. G. Sesnon	10,361	Dec. 18, 1877	12	1027
Wall-pocket pattern	W. Hamilton	10,271	Oct. 9, 1877	12	36
Water-font and contribution-box, Combined	J. W. Fiske	9,757	Feb. 20, 1877	11	291
Water-pipe, Sheet-metal	J. F. Starr, jr	9,891	Apr. 3, 1877	11	555
White-lined pipkin	J. E. Jeffords	10,312	Nov. 13, 1877	12	798
Windmills, Pattern for	G. Neally	10,381	Dec. 25, 1877	12	1078
Wire table-mat	C. E. Peirce	9,736	Feb. 6, 1877	11	198

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
				Spec.	Dr'g.	Vol.	Page.
A.							
Agricultural implements, Socket for	T. B. De Forest	7,567	Mar. 27, 1877	1060	326	11	548
Air cooling and distributing apparatus	M. J. Kelly	7,643	Apr. 24, 1877	1186	357	11	738
Alkaline solutions, Process and apparatus for evaporating and calcining.	M. L. Keen and H. Burgess	7,485	Jan. 30, 1877	1128	348	11	194
Animal-cages, Fountain-cup for	O. Lindemann	8,018	Dec. 25, 1877	1073	325	12	1125
Animal matter, Treating and drying	W. C. Marshall	7,742	June 12, 1877	548	167	11	1053
Animal-trap	F. E. Rice	7,798	July 17, 1877	793	243	12	135
Atomizer	J. J. Essex	7,705	May 29, 1877	1446	435	11	966
Auger, Earth	C. D. Pierce	8,016	Dec. 25, 1877	1070	325	12	1125
Auger, Hollow	C. S. Bonney	7,689	May 22, 1877	1138	342	11	920
Auger, Hollow	G. N. Stearns	7,484	Jan. 30, 1877	1127	347	11	193
Axle box, Car	O. Tomlinson	7,800	July 17, 1877	796	244	12	136
Axle-boxes, Manufacture of	T. V. Le Roy	7,482	Jan. 30, 1877	1125	347	11	193
B.							
Bag-fastener	H. Redden	7,735	June 12, 1877	540	165	11	1052
Bake-pan	J. Gilbert	7,752	June 19, 1877	851	257	11	1105
Bale-tie	A. A. Goldsmith	7,480	Jan. 30, 1877	1123	347	11	193
Bale-tie	W. B. Hayden	7,471	Jan. 23, 1877	856	264	11	149
Bale tie, Cotton	W. J. Carroll	7,924	Oct. 23, 1877	880	254	12	708
Baling-press	P. K. Dederick	7,983	Dec. 11, 1877	473	149	12	1023
Baling-press	P. K. Dederick	7,984	Dec. 11, 1877	476	149	12	1023
Barrel-hoop	L. Reed	7,932	Oct. 30, 1877	1106	322	12	752
Bed-bottom, Spring	F. B. Franklin	7,597	Apr. 10, 1877	537	167	11	636
Bedstead-frame	J. M. Farnham	7,704	May 29, 1877	1445	434	11	966
Bedstead, Sofa	D. J. Powers	7,518	Feb. 20, 1877	779	242	11	326
Bedstead, Wardrobe	S. S. Burr	7,892	Sept. 18, 1877	711	210	12	516
Bedstead, Wardrobe	F. Caulier	7,817	July 31, 1877	1300	390	12	223
Belt	W. Mullee	7,879	Sept. 11, 1877	465	139	12	474
Binder for books, Temporary	H. H. Edwards	7,815	July 24, 1877	1087	325	12	182
Binder, Invoice	W. P. Bissell	7,885	Sept. 18, 1877	700	207, 208	12	515
Blind staples, Machine for making and setting	J. Keith	7,516	Feb. 20, 1877	776	242	11	325
Boiler-cleaner	T. O. Kemp	7,916	Oct. 16, 1877	634	183	12	665
Boiler furnace, Steam	C. D. Smith	7,954	Nov. 20, 1877	756	225	12	887
Boiler-heads, Machine for forming flanges on	R. C. Nugent	7,834	Aug. 7, 1877	232	69	12	265
Book-case, Revolving	J. Danner	7,523	Feb. 20, 1877	786	244	11	326
Book, shawl, or parcel handle	G. Havell	7,778	July 3, 1877	267	78	12	48
Books, Fire-proof cover for	E. W. Glover	7,487	Feb. 6, 1877	275	90	11	239
Boot and shoe	T. J. Greenwood	7,912	Oct. 16, 1877	630	182	12	665
Boot and shoe crimping machine	L. O. Makepeace	7,686	May 15, 1877	872	258	11	875
Boot and shoe heel cutting machine	E. T. Green	7,969	Nov. 27, 1877	1058	317	12	937
Boot and shoe heel stiffeners, Machine for shaping	J. Kimball	7,708	May 29, 1877	1448	435, 436	11	967
Boot and shoe heels and soles, Treating leather for	J. J. Sawin	7,667	May 8, 1877	576	171	11	829
Boot and shoe soles, Machine for nailing	L. Goddu	7,692	May 22, 1877	1141	343	11	920
Boots and shoes, Manufacturing	D. A. Sutherland	7,510	Feb. 13, 1877	543	166	11	286
Boring machine, Metal	J. Simpson	7,819	July 31, 1877	1302	390	12	224
Bosom-pad	J. C. Tallman	7,737	June 12, 1877	542	166	11	1052
Bottle-stopper	C. De Quillfeldt	7,722	June 5, 1877	221	70	11	1007
Bottle-stopper	W. Morgenstern	7,847	Aug. 14, 1877	524	158	12	310
Bottle-stopper	A. E. Rich	7,797	July 17, 1877	791	243	12	135
Bottle-stopper	D. T. Robinson	7,581	Mar. 27, 1877	1080	332, 333	11	550
Bottle-stoppers, Wire fastening for	H. W. Yerington	7,501	Feb. 6, 1877	295	95	11	242
Bottles and bottled liquids, Case for transporting	G. Wilson	8,011	Dec. 25, 1877	1063	323	12	1124
Brick-kiln	E. W. Bingham	7,504	Feb. 13, 1877	537	165	11	286
Brush	J. L. Whiting	7,846	Aug. 14, 1877	524	158	12	310
Bucket bail and ear	A. Miller	7,483	Jan. 30, 1877	1126	347	11	193
Buckle	B. C. Young	7,712	May 29, 1877	1452	437	11	967
Bullets, Machine for patching	S. W. Wood	7,655	May 1, 1877	304	89	11	786
Bung-cutting machine	W. L. Standish	7,843	Aug. 14, 1877	521	157	12	310
Burner, Vapor	L. Fischer	7,706	May 29, 1877	1447	435	11	967
Burning hydrocarbons, Apparatus for	E. F. Rogers	7,848	Aug. 14, 1877	525	158	12	310
Butter-worker	E. D. and E. W. Kitchen	7,793	July 17, 1877	787	242	12	134
C.							
Candle for miner's use	P. R. Gottstein	7,777	July 3, 1877	266		12	48
Candle-holder	C. Kirchhof	7,652	May 1, 1877	300	88	11	785
Cap	M. Marks	7,807	July 24, 1877	1078	322	12	181
Cap	M. Marks	7,808	July 24, 1877	1079	322	12	181
Capstan, Power	J. P. Manton and G. H. Remington.	8,001	Dec. 18, 1877	766	231, 232	12	1073
Car bumper and draw-bar, Railway	A. Middleton, jr.	7,551	Mar. 6, 1877	268	83	11	416
Car-coupling	D. M. Campbell	7,703	May 29, 1877	1444	434	11	966
Car-coupling	J. Enos	7,515	Feb. 20, 1877	775	242	11	325
Car-coupling	R. A. Kelly	7,629	Apr. 24, 1877	1164	353	11	724
Car-coupling	E. M. Van Hoesen and N. H. Brown	7,922	Oct. 23, 1877	879	253	12	707
Car-door-hanging device	E. E. Pratt	7,795	July 17, 1877	789	242	12	135
Car frame and platform, Metallic	B. J. La Mothe	7,768	June 26, 1877	1099	332, 333	11	1150

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Car-frame, Metal	F. J. Kimball	7,730	June 12, 1877	534	164	11	1051
Car heater, Railway	E. H. Ashcroft	7,967	Nov. 27, 1877	1055	317	12	937
Car-roof	J. C. Wands	7,998	Dec. 18, 1877	763	230	12	1072
Car-roof	J. C. Wands	7,999	Dec. 18, 1877	764	231	12	1072
Car-spring	G. F. Godley	7,832	Aug. 7, 1877	229	68	12	265
Car-spring	G. F. Godley	7,852	Aug. 21, 1877	753	224	12	348
Car-spring	E. J. Horner	7,536	Feb. 27, 1877	1062	327	11	371
Car-spring	E. J. Horner	7,537	Feb. 27, 1877	1062	328	11	371
Car-ventilation	C. G. Lea	7,578	Mar. 27, 1877	1077	332	11	549
Car-wheel	J. K. Sax and G. W. Kear	8,017	Dec. 25, 1877	1072	325	12	1125
Cars and other vehicles, Apparatus for heating	C. C. Converse	7,506	Feb. 13, 1877	540	165	11	286
Cars, Change-gate for	J. B. Slawson	7,780	July 3, 1877	269	78	12	48
Cars, Machinery for propelling	G. T. Beauregard	7,669	May 8, 1877	578	172	11	830
Card, Playing	I. N. Richardson	7,755	June 19, 1877	853	258	11	1105
Card, Playing	I. N. Richardson	7,756	June 19, 1877	854	258	11	1105
Card, Playing	I. N. Richardson	7,757	June 19, 1877	855	259	11	1105
Carriage sbitting-rail	A. M. Whipple	7,665	May 8, 1877	575	170	11	829
Carriage, Shifting-seat	C. N. Dennett	7,749	June 19, 1877	847	256	11	1104
Carriage-tops, Concealed jointed brace for	D. W. Baird	7,859	Aug. 28, 1877	993	295	12	391
Cartridge	H. Kellogg	7,569	Mar. 27, 1877	1062	327	11	548
Cartridge	D. E. Williams	7,783	July 3, 1877	272	79	12	49
Cartridge, Metallic	E. Allen	7,647	May 1, 1877	295	87	11	784
Case-hardening box	J. Greene	7,533	Feb. 27, 1877	1058	326	11	371
Casing-spear	F. J. Fox	7,675	May 15, 1877	860	255	11	874
Caster, Table	H. A. Dirkes	7,541	Feb. 27, 1877	1068	329	11	372
Cellar, Water-proof	T. New	7,920	Oct. 23, 1877	878	258	12	707
Chain-machine	F. Leonard	7,492	Feb. 6, 1877	282	92, 93	11	240
Chair	A. B. Stevens	7,582	Mar. 27, 1877	1081	333	11	550
Chandelier, Extension	L. Hull	7,561	Mar. 20, 1877	764	234	11	499
Chimney and ventilator, Combined	L. B. Silver	7,766	June 26, 1877	1096	332	11	1149
Cider-mill	D. T. Willson	7,770	June 26, 1877	1102	333	11	1150
Cigar-box	C. Gluud	7,707	May 29, 1877	1448	435	11	967
Clay and ore crusher	T. and J. Clifford	7,645	May 1, 1877	293	86	11	784
Clock lock-work attachment	J. W. Williams	7,594	Apr. 3, 1877	290	92	11	596
Clothes-wringer	N. B. White	7,761	June 19, 1877	858	260	11	1106
Coat	A. P. Silva	7,759	June 19, 1877	856	259	11	1105
Cocks, Locking-case for stop	V. T. Hall	7,587	Apr. 3, 1877	275	89	11	594
Cocks, Locking device for stop	V. T. Hall	7,598	Apr. 10, 1877	538	168	11	637
Coffee-mill	T. Strobridge	7,583	Mar. 27, 1877	1082	333	11	550
Coffee-pot	R. L. Nelson	7,716	May 29, 1877	1455	437	11	968
Coffin	F. H. Hill	7,649	May 1, 1877	298	87	11	785
Coin detecter, Counterfeit	W. Painter	7,620	Apr. 17, 1877	853	262	11	685
Collar, Horse	M. Turley	7,711	May 29, 1877	1451	436	11	967
Collars, Cap for horse	J. F. Walsh	7,951	Nov. 13, 1877	502	148	12	840
Convertible chair	J. Lee	7,970	Nov. 27, 1877	1060	318	12	938
Cooking-utensil	S. Spoor	7,602	Apr. 10, 1877	543	169	11	637
Copper for boilers, &c., Preparing sheet	A. O'Neill	7,913	Oct. 16, 1877	631		12	665
Corn-popper	C. F. Wickwire	7,460	Jan. 9, 1877	379	116	11	66
Corn-sheller	J. E. Lewis	7,616	Apr. 17, 1877	847	261	11	685
Corn-shellers, Cob-carrier for	H. H. Eby	7,851	Aug. 21, 1877	752	224	12	348
Corset	M. Cohn	7,596	Apr. 10, 1877	536	167	11	636
Corset	C. A. Griswold	7,895	Sept. 25, 1877	956	286	12	559
Corset	L. C. Warner	7,782	July 3, 1877	272	79	12	48
Corset, Skirt-supporting	C. A. Griswold	7,903	Oct. 9, 1877	388	111, 112	12	624
Corset-spring	C. Judson	7,729	June 12, 1877	533	164	11	1051
Cotton-bale tie	J. L. Sheppard	7,546	Mar. 6, 1877	261	81	11	414
Cotton, &c., opening machine	W. C. Jillson and A. B. Palmer	7,525	Feb. 20, 1877	788	244	11	327
Coupling and steering apparatus	W. Frick	7,934	Nov. 6, 1877	235	70	12	793
Crape, laces, &c., Restoring	A. J. Shriver	7,765	June 26, 1877	1095		11	1149
Crucibles, Apparatus for making plumbago	W. Smith	7,593	Apr. 3, 1877	288	92	11	596
Cuff	J. W. A. Cluett	7,878	Sept. 11, 1877	464	138	12	473
Cultivator	R. Ellwood and R. L. Pitcher	7,560	Mar. 20, 1877	763	234	11	498
Cultivator	H. I. Heaton	7,944	Nov. 13, 1877	489	145, 146	12	839
Cultivator	J. Schroeder	7,496	Feb. 6, 1877	288	94	11	241
Cultivator	J. Schroeder	7,497	Feb. 6, 1877	290	94	11	241
Cultivator, Corn	A. Canfield	7,513	Feb. 20, 1877	772	241	11	325
Cultivator, Cotton	E. H. Sutton	7,955	Nov. 20, 1877	758	225	12	887
Cultivator, Equalizing	M. Eichholtz	7,738	June 12, 1877	542	166	11	1052
Cultivator, Wheel	E. M. and M. L. Kissell	7,833	Aug. 7, 1877	230	68	12	265
Curry-comb	M. Sweet	7,820	July 31, 1877	1304	391	12	224
Curry-comb	M. Sweet	7,821	July 31, 1877	1305	391	12	224
Curry-comb	M. Sweet	7,822	July 31, 1877	1306	391	12	224
D.							
Dental chair	J. B. Morrison	7,687	May 15, 1877	874	259	11	876
Dental drill	G. V. Black	7,452	Jan. 2, 1877	185	57	11	33
Dental engine	C. M. Curtis	7,670	May 8, 1877	579	172	11	830
Dental engines, Flexible power-conveyor for	E. T. Starr	7,960	Nov. 20, 1877	762	226	12	888
Drop-press	W. C. Hicks	7,788	July 10, 1877	526	159	12	92
Drying ground wheat, Apparatus for	C. S. Fuller	7,618	Apr. 17, 1877	850	261	11	685
Dust-pan	S. M. Rennie	7,866	Aug. 28, 1877	1009	300	12	392
E.							
Electroplating with nickel, Anode for	A. Hermann and W. H. Taylor	7,489	Feb. 6, 1877	278	91	11	240
Elliptic springs, Manufacture of	A. French	7,660	May 8, 1877	570	169	11	829
Enameling ironware	E. C. Quinby and J. C. Whiting	7,900	Oct. 2, 1877	186		12	588
Explosive composition	E. Judson	7,481	Jan. 30, 1877	1124		11	193
Eyeglass-holder	S. F. Merritt	7,743	June 12, 1877	549	167	11	1053

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
				Spec.	Dr'g.	Vol.	Page.
F.							
Fan, Fly	W. R. Fowler	7,613	Apr. 17, 1877	844	260	11	684
Fare-register	W. Daniels	8,019	Dec. 25, 1877	1074	325	12	1126
Fare-register	W. H. Hornum	7,554	Mar. 13, 1877	507	157	11	455
Fare-register	W. H. Hornum	8,013	Dec. 25, 1877	1065	324	12	1124
Fare-register	W. H. Hornum	8,014	Dec. 25, 1877	1067	324	12	1124
Faucet	A. Fuller	7,619	Apr. 17, 1877	851	262	11	685
Faucet	F. Roach	7,571	Mar. 27, 1877	1064	327	11	548
Faucet, Self-closing	H. C. Meyer	7,694	May 22, 1877	1145	344	11	921
Feed-cutter	J. R. Whittemore	7,605	Apr. 10, 1877	547	170	11	638
Felt fabric	E. Sealy	7,718	May 29, 1877	1458	438	11	968
Fence barb, Wire	H. N. Frentress	7,698	May 22, 1877	1150	345	11	921
Fence barb, Wire	H. N. Frentress	7,697	May 22, 1877	1149	344	11	921
Fence, Barbed	J. Brinkerhoff	7,830	Aug. 7, 1877	228	67	12	265
Fence, Iron	M. G. Freeman	7,775	July 3, 1877	265	77	12	48
Fence-picket, Corrugated	B. F. Miller	7,562	Mar. 20, 1877	765	234	11	499
Fence-wire, Barbing	J. F. Glidden and P. W. Vaughan	7,566	Mar. 20, 1877	770	236	11	499
Fifth-wheel for platform-wagons	W. Fisher	7,917	Oct. 16, 1877	635	183	12	666
Fifth-wheel, Vehicle	W. J. Elsom	7,977	Dec. 4, 1877	220	67	12	977
File, Bill	W. L. Woods	7,840	Aug. 7, 1877	242	71	12	266
Fire-arm, Breech-loading	R. F. Cook	7,478	Jan. 30, 1877	1119	346	11	192
Fire-arm, Magazine	W. S. Smoot	7,827	July 31, 1877	1311	393	12	225
Fire-arm, Magazine	W. S. Smoot	7,828	July 31, 1877	1314	393	12	226
Fire-arm, Revolving	D. Moore	7,610	Apr. 17, 1877	839	259	11	684
Fire-engine, Knapsack	J. W. Douglas	7,774	July 3, 1877	264	77	12	47
Fire-extinguisher	J. Dillon	7,930	Oct. 30, 1877	1103	321	12	751
Fire-kindler	C. H. Hayden	7,740	June 12, 1877	545	166, 167	11	1053
Fire-place	C. S. Rankin	7,787	July 10, 1877	524	158	12	91
Fish, Compound for preserving	H. Sellman, H. Reessing, and J. Wolff.	7,959	Nov. 20, 1877	762		12	888
Floor-cloth, Roller for drying	R. Hoskin	7,824	July 31, 1877	1307	392	12	225
Fly-trap	H. A. Farnam	7,576	Mar. 27, 1877	1073	331	11	549
Folding chair	G. McAleer	8,004	Dec. 18, 1877	771	233	12	1074
Fruit-basket	M. L. and O. A. Stray	7,915	Oct. 16, 1877	633	182	12	665
Fruit-box	J. Shepard and B. B. Lewis	7,987	Dec. 11, 1877	482	151	12	1024
Fruit-drier	B. L. Rider	7,654	May 1, 1877	303	88	11	786
Fruit-drier	J. Williams	7,500	Feb. 6, 1877	294	95	11	242
Fuel, Machine for twisting hay for	J. S. Foster	7,639	Apr. 24, 1877	1178	356	11	737
Furnace for finishing sheet-iron	W. D. Wood	7,547	Mar. 6, 1877	262	81	11	415
Furnace for smelting and treating metals	G. W. Sweet	7,468	Jan. 16, 1877	615	188	11	103
G.							
Gaiters, boots, and shoes, Manufacture of	P. Fischer	7,646	May 1, 1877	294	86	11	784
Gas and water meters, Register for	J. J. Squire	7,601	Apr. 10, 1877	541	169	11	637
Gas-burner	B. Donohue	7,470	Jan. 23, 1877	855	264	11	149
Gas-generator, Carbonic-acid	A. Kayser	7,854	Aug. 21, 1877	756	225	12	349
Gas-heater	C. H. Prentiss	7,636	Apr. 24, 1877	1174	355	11	736
Gas-light shade	B. B. Schneider	7,457	Jan. 2, 1877	190	58	11	34
Gas-lighting device	P. B. Tyler, W. M. Chandler, and L. F. Standish.	7,928	Oct. 23, 1877	886	255	12	708
Gas, Process and apparatus for manufacturing illuminating.	J. Rigby	7,590	Apr. 3, 1877	279	90, 91	11	595
Gas-retort charges, Apparatus for filling	T. F. Rowland	7,631	Apr. 24, 1877	1167	354	11	735
Gas-retort-lid fastening	H. G. Morris	7,456	Jan. 2, 1877	189	58	11	34
Gas-retorts, Apparatus for raking	T. F. Rowland	7,592	Apr. 3, 1877	286	91	11	595
Gas-retorts, Machine for charging	T. F. Rowland	7,591	Apr. 3, 1877	284	91	11	595
Gate	J. S. Winsor	7,897	Sept. 25, 1877	958	286	12	560
Gear-wheels, Manufacture of	J. Comly	7,584	Apr. 3, 1877	270	88	11	594
Glass-furnace	G. W. and C. W. Foster	7,764	June 26, 1877	1094	331	11	1149
Glue, Composition	J. H. Craig	7,714	May 29, 1877	1455		11	968
Grain-binder	L Lancaster	7,491	Feb. 6, 1877	279	91, 92	11	240
Grain-binder	S. D. Locke	7,701	May 22, 1877	1152	345, 346	11	922
Grain-binder	A. J. Smith	7,642	Apr. 24, 1877	1185	357	11	737
Grain-drier	L. S. Chichester	7,713	May 29, 1877	1453	437	11	968
Grain-drill	B. Kuhns	7,709	May 29, 1877	1449	436	11	967
Grain-elevator, Floating	C. W. Mills	7,588	Apr. 3, 1877	277	90	11	594
Grain scouring and polishing machine	H. P. Becker	7,486	Feb. 6, 1877	274	90	11	239
Grinding-machine	S. Bevan	7,595	Apr. 10, 1877	535	167	11	636
Grinding-machine	J. M. Poole	7,809	July 24, 1877	1079	323	12	181
Grinding mill, Cane	L. A. Hedges	7,989	Dec. 11, 1877	485	151, 152	12	1024
Grinding objects cylindrically, Machine for	J. M. Poole	7,978	Dec. 4, 1877	221	68	12	977
Gun, Machine or battery	B. B. Hotchkiss	7,881	Sept. 11, 1877	466	139, 140	12	474
Gun, Magazine	W. R. Evans	7,635	Apr. 24, 1877	1172	355	11	736
H.							
Hair, Refining and bleaching	J. Béné	7,850	Aug. 21, 1877	751		12	348
Hammer, Power	T. Shaw	7,475	Jan. 23, 1877	860	265	11	149
Handcuff	O. C. Phelps	7,873	Sept. 4, 1877	202	62	12	428
Harvester	C. C. Bradley	7,831	Aug. 7, 1877	229	68	12	265
Harvester	F. Bramer	7,539	Feb. 27, 1877	1064	328	11	372
Harvester	R. Emerson	7,976	Dec. 4, 1877	219	67	12	977
Harvester	J. S. Marsh	7,870	Sept. 4, 1877	197	60, 61	12	427
Harvester	J. Pine	7,914	Oct. 16, 1877	631	182	12	665
Hat	F. P. Flanagan	7,691	May 22, 1877	1140	342	11	920
Hat-pouncing machine	S. S. Wheeler and D. B. Manley	7,899	Oct. 2, 1877	184	53	12	588
Hats, Attaching sweat-bands to	N. A. Baldwin	7,771	July 3, 1877	261	76	12	47
Hay and cotton press	P. K. Dederick	7,981	Dec. 11, 1877	471	148	12	1022

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Hay and cotton press	P. K. Dederick	7,982	Dec. 11, 1877	473	148	12	1023
Hay-elevator	G. Van Sickle	7,681	May 15, 1877	866	257	11	875
Hay-rake, Horse	H. A. Bailey and A. R. Burdick	7,968	Nov. 27, 1877	1057	317	12	937
Hay-rake, Horse	G. H. Dailey and R. M. Treat	7,974	Nov. 27, 1877	1064	319	12	938
Hay-rake, Horse	H. H. Hatheway	7,648	May 1, 1877	296	87	11	785
Hay-rake, Horse	L. Myers	7,599	Apr. 10, 1877	539	168	11	637
Hay-rake, Horse	G. M. and C. C. Richardson	7,836	Aug. 7, 1877	237	69	12	266
Hay-rake, Horse	J. H. Shireman	7,988	Dec. 11, 1877	483	151	12	1024
Hay-rake, Horse	E. Smith and S. Cowles	7,696	May 22, 1877	1148	344	11	921
High and low pressure engine, Combined	T. L. Jones	7,585	Apr. 3, 1877	271	88	11	594
Hoisting-machine	G. H. Reynolds	7,727	June 5, 1877	227	71	11	1008
Hoisting-pulley apparatus, Screw	L. T. Pyott	7,611	Apr. 17, 1877	841	259	11	684
Hollow ware, Machine for grinding and polishing	W. Scully	7,963	Nov. 27, 1877	1050	315	12	936
Hoops, Machine for shaving half-round	G. B. Selden	7,799	July 17, 1877	794	243	12	135
Horse-rake	J. Hunsberger	7,745	June 12, 1877	550	168	11	1053
Horse-rake	J. Hunsberger	7,746	June 12, 1877	551	168	11	1054
Horseshoe	T. Thistlewood	7,476	Jan. 23, 1877	861	265	11	150
Horseshoe-nail machine	C. W. Woodford	7,956	Nov. 20, 1877	759	226	12	888
Horseshoe-nails, Die for trimming the points of	J. H. Zottman	7,461	Jan. 9, 1877	379	116	11	66
Horseshoe-nails, Machine for making	J. A. Huggett	8,003	Dec. 18, 1877	770	232, 233	12	1073
Horseshoe-nails, Machine for stamping, pressing, and pointing.	F. Sandham	7,991	Dec. 11, 1877	487	152	12	1024
Hose and tubes with india-rubber, Lining	J. B. Forsyth	7,887	Sept. 18, 1877	702		12	515
Hot-air furnace	J. Magee	7,710	May 29, 1877	1450	436	11	967
Hot-air-furnace regulator	A. C. Norcross	7,638	Apr. 24, 1877	1177	356	11	736
Hubs to axles, Attaching	D. A. Johnson	7,549	Mar. 6, 1877	266	82	11	415
Hydraulic press	A. H. Emery	7,790	July 17, 1877	783	240	12	134
Hydraulic press	A. H. Emery	7,791	July 17, 1877	783	240, 241	12	134
I.							
Injector for feeding boilers	W. Sellers	7,816	July 24, 1877	1088	325	12	182
Injector or ejector for steam-engines	G. H. Little	7,653	May 1, 1877	301	88	11	785
Iron, Treating	W. Sleicher, jr	7,949	Nov. 13, 1877	498	147	12	840
Iron ware, Manufacture of enameled	F. G. and W. F. Niedringhaus	7,779	July 3, 1877	268		12	48
Ironing-machine	P. O'Thayne	7,936	Nov. 6, 1877	237	71	12	793
Ironing-machine	P. O'Thayne	7,937	Nov. 6, 1877	238	71	12	793
K.							
Key and knob fastener, Combined	W. Neracher	7,600	Apr. 10, 1877	540	168	11	637
Key-hole guard for locks	C. H. Covell	7,720	June 5, 1877	219	69	11	1006
Knitting-machine needle	F. Burns	7,505	Feb. 13, 1877	539	165	11	286
Knives and forks to handles, Attaching	G. S. Hastings	8,000	Dec. 18, 1877	765	231	12	1073
Knob, Furniture	J. H. Shelton	7,498	Feb. 6, 1877	290	94	11	241
L.							
Lamp	A. C. Arnold and E. Blackman	7,502	Feb. 13, 1877	535	164	11	285
Lamp	H. H. Doty	7,867	Aug. 28, 1877	1010	300	12	392
Lamp	M. B. Dyott	7,458	Jan. 9, 1877	374	114	11	66
Lamp	D. Whiteford	7,957	Nov. 20, 1877	759	226	12	888
Lamp-burner	G. H. Chinnock	7,634	Apr. 24, 1877	1171	355	11	735
Lamp-chimney	R. R. Crosby	7,659	May 8, 1877	569	169	11	828
Lamp-chimney	S. W. Fowler	7,463	Jan. 16, 1877	603	186	11	102
Lamp chimney and shade, Combined	T. B. Atterbury	7,529	Feb. 27, 1877	1054	325	11	371
Lamp-fixture, Extension	J. A. Evarts	7,628	Apr. 24, 1877	1163	353	11	734
Lamp, Safety derrick	J. Dillon	7,773	July 3, 1877	263	77	12	47
Lamp-shade holder	C. Votti	7,511	Feb. 13, 1877	545	166	11	286
Lamp, Street	J. S. Hagerty	7,568	Mar. 27, 1877	1060	326	11	548
Lantern	J. Hughes	7,472	Jan. 23, 1877	857	264	11	149
Lard, Self-raising	T. H. Rosser	7,979	Dec. 4, 1877	222	68	12	978
Latch, Door	F. D. Robinson	8,008	Dec. 25, 1877	1060	322	12	1123
Latch, Reversible	W. E. Sparks	7,844	Aug. 14, 1877	522	157	12	310
Lathe	D. Heer	7,535	Feb. 27, 1877	1060	327	11	371
Lathing, Metallic	J. W. Kensett	7,651	May 1, 1877	300	88	11	785
Leather-cutting gage	J. Potter	7,796	July 17, 1877	790	242	12	135
Leather-dressing composition	M. Shaw	7,509	Feb. 13, 1877	543		11	286
Leather, Manufacture of artificial	J. Harrington	7,952	Nov. 13, 1877	503		12	840
Lighting device, Pocket	P. B. Tyler, W. M. Chandler, and L. F. Standish.	7,927	Oct. 23, 1877	884	255	12	708
Lightning-rod	L. Adams	7,939	Nov. 6, 1877	239	72	12	794
Locomotive fire-box	G. W. Tilton	7,519	Feb. 20, 1877	780	243	11	326
Loom	L. J. Knowles	7,784	July 3, 1877	273	79, 80	12	49
Loom	L. J. Knowles	7,785	July 3, 1877	276	80, 81	12	49
Lounge, Folding	H. S. Carter	7,685	May 15, 1877	872	258	11	875
Low-water alarm and fire-extinguisher	B. R. Singleton	7,767	June 26, 1877	1097	332	11	1150
Lubricator	J. Gates	7,661	May 8, 1877	571	169	11	829
Lubricator	J. Gates	7,662	May 8, 1877	572	170	11	829
Lubricator	J. Gates	7,663	May 8, 1877	572	170	11	829
Lubricator	E. J. Gerdom and C. W. Schindler	7,508	Feb. 13, 1877	542	166	11	286
M.							
Malt extract, Manufacturing	H. R. Randall	7,688	May 15, 1877	876		11	876
Match-blocks, Machine for making	E. Andrews and W. Tucker	7,825	July 31, 1877	1308	392	12	225
Match-splint	G. Hargreaves	7,553	Mar. 13, 1877	506	157	11	455
Meal-crushing machine	F. Wegmann	7,829	July 31, 1877	1315	394	12	226
Meat-chopping machine	L. Steigert	8,002	Dec. 18, 1877	768	232	12	1073
Meat-holder	S. Poole	7,995	Dec. 18, 1877	761	230	12	1072
Meat or animal matter, Preserving	T. Sim	7,564	Mar. 20, 1877	767	235, 236	11	499

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Mechanical movement	J. E. Lewis	7,617	Apr. 17, 1877	849	261	11	685
Medicine-glass	T. G. Boggs	7,606	Apr. 17, 1877	832	258	11	683
Metallic can or vessel	C. P. Maxfield	8,015	Dec. 25, 1877	1069	324	12	1125
Metallic surfaces, Process and apparatus for stippling.	R. Dimes	7,656	May 1, 1877	306	89	11	786
Metallic surfaces, Process and apparatus for stippling.	R. Dimes	7,657	May 1, 1877	307	89	11	786
Metallic surfaces, Process and apparatus for stippling.	R. Dimes	7,658	May 1, 1877	307	90	11	786
Metallic vessel	E. T. Covell	7,942	Nov. 13, 1877	487	144	12	838
Metallurgic process and furnace	C. W. Siemens	7,862	Aug. 28, 1877	999	296, 297	12	391
Middlings-purifier	R. Craik	7,884	Sept. 11, 1877	472	140	12	474
Middlings-separator	J. P. Reel and A. J. Seyler	7,526	Feb. 20, 1877	789	244	11	327
Milk-cooler	H. A. Hannum	7,853	Aug. 21, 1877	755	224	12	349
Milk-cooler	R. Smith	7,823	July 31, 1877	1306	391	12	224
Millstone-dressing machine	L. Moore	7,754	June 19, 1877	852	258	11	1105
Millstone-driver	W. E. Sargeant	7,980	Dec. 4, 1877	223	68	12	978
Molding-machine	T. F. Hammer	8,007	Dec. 25, 1877	1059	322	12	1123
Molding sheet-metal	A. Destouy	7,609	Apr. 17, 1877	838	259	11	683
Monkey-wrench	A. A. Sanborn and C. Burroughs	8,005	Dec. 18, 1877	772	233	12	1074
Mowing-machine	F. Bramer	7,540	Feb. 27, 1877	1066	329	11	372
Musical instruction, Device for	R. S. Hill	7,640	Apr. 24, 1877	1179	356	11	737
Musical instruments, Key for	J. P. Lord	7,935	Nov. 6, 1877	236	71	12	793
N.							
Nail assorting and feeding machine	B. Bevelander	7,548	Mar. 6, 1877	264	82	11	415
Neck-tie	W. H. Hart, jr.	7,909	Oct. 9, 1877	394	113	12	624
Nursery-chair	E. S. French	7,532	Feb. 27, 1877	1056	326	11	371
Nut-lock	K. C. Naylor	7,507	Feb. 13, 1877	541	166	11	286
O.							
Oatmeal-machine	A. J. Ehrrichson	7,542	Feb. 27, 1877	1068	330	11	372
Oil, &c., can	J. G. Evenden	7,531	Feb. 27, 1877	1056	325	11	371
Oil, Process and apparatus for the manufacture of deodorized heavy hydrocarbon.	J. Merrill	7,733	June 12, 1877	536	165	11	1052
Oils, Production of deodorized heavy hydrocarbon	J. Merrill	7,826	July 31, 1877	1309	392	12	225
Ores, Self-discharging pulverizing-barrel for	A. B. Paul	7,794	July 17, 1877	788	242	12	135
P.							
Packing, Oil-well	J. R. Cross	7,772	July 3, 1877	261	77	12	47
Packing, Oil-well	J. R. Cross	7,902	Oct. 2, 1877	190	54	12	588
Packing, Oil-well	O. Redmond	7,494	Feb. 6, 1877	285	93	11	240
Packing, Oil-well	O. Redmond	7,495	Feb. 6, 1877	287	94	11	241
Packing, Piston	A. J. Stevens	7,781	July 3, 1877	271	78	12	48
Packing, Piston	J. T. Wright and M. Schneble	7,528	Feb. 20, 1877	791	245	11	328
Pantaloons, Steaming and drying apparatus for shaping.	E. B. Viets	7,603	Apr. 10, 1877	544	169	11	638
Paper-bag machine	C. Amazeen	7,876	Sept. 11, 1877	460	137, 138	12	473
Paper board, Apparatus for lining	H. L. Palmer	7,517	Feb. 20, 1877	778	242	11	325
Paper box	H. R. Heyl	7,488	Feb. 6, 1877	277	90	11	239
Paper box	T. J. Powers	7,570	Mar. 27, 1877	1063	327	11	548
Paper boxes, Machine for forming and inserting wire staples in.	H. R. Heyl	7,608	Apr. 17, 1877	835	258	11	683
Paper, Carbon	A. B. Simonds	7,837	Aug. 7, 1877	238	70	12	266
Paper-cutting machine	E. Schlenker	7,612	Apr. 17, 1877	842	260	11	684
Paper-pulp distributer	I. Jennings	7,962	Nov. 27, 1877	1050	315	12	936
Paraffine-wax, Purifying	F. X. Byerley	7,559	Mar. 20, 1877	762		11	498
Pavement, Concrete	R. Skinner and B. Bonnet	7,996	Dec. 18, 1877	762	230	12	1072
Pavement, Concrete	R. Skinner and B. Bonnet	7,997	Dec. 18, 1877	762		12	1073
Pen and pencil case	C. M. Johnson	7,538	Feb. 27, 1877	1063	328	11	372
Pencil	H. L. Lipman	7,992	Dec. 11, 1877	488	152	12	1024
Pencil	J. Reckendorfer	7,993	Dec. 11, 1877	489	152	12	1024
Pencil, Copying	C. Walpuski	7,907	Oct. 9, 1877	392	112	12	624
Pencil, Copying	C. Walpuski	7,908	Oct. 9, 1877	393		12	624
Piano-action frame	C. F. T. Steinway	7,950	Nov. 13, 1877	500	147, 148	12	840
Piano and organ keys	E. P. Needham	7,953	Nov. 13, 1877	504	148	12	840
Piano attachment	J. Fairman	7,750	June 19, 1877	849	256	11	1104
Piano-forte stringing device	J. D. Elliot	7,933	Nov. 6, 1877	234	70	12	793
Pictures, Producing stereoscopic	H. A. Reynolds	7,905	Oct. 9, 1877	390		12	624
Pile-driver, Steam	T. T. Loomis	7,586	Apr. 3, 1877	272	88, 89	11	594
Pipe-coupling	J. Old	7,673	May 8, 1877	585	173	11	830
Pipe-elbow machine	C. H. Amann	7,874	Sept. 4, 1877	202	62	12	428
Pipes, &c., Joint and coupling for	J. Old	7,493	Feb. 6, 1877	284	93	11	240
Plane, Bench	G. F. Evans	7,918	Oct. 23, 1877	876	252	12	707
Plane, Bench	J. A. Traut and H. Richards	7,565	Mar. 20, 1877	768	235	11	499
Planing-machine	O. R. Patterson	7,545	Mar. 6, 1877	261	81	11	414
Planter, Corn	A. Barnes	7,521	Feb. 20, 1877	783	243	11	326
Planter, Corn	A. Barnes	7,522	Feb. 20, 1877	785	243	11	326
Planter, Corn	A. J. Going	7,462	Jan. 9, 1877	380	116	11	66
Planter, Corn	W. W. Hubbard	7,577	Mar. 27, 1877	1074	331	11	549
Planter, Corn	D. W. Jacoby	7,527	Feb. 20, 1877	790	245	11	327
Planter, Corn	S. J. Miller and L. Wright	7,695	May 22, 1877	1147	344	11	921
Planter, Corn	A. M. Southard	7,838	Aug. 7, 1877	238	70	12	266
Plow	E. Haiman	7,724	June 5, 1877	221	70	11	1004
Plow	A. Lauer and J. Hartmau	7,803	July 17, 1877	800	245	12	136
Plow	J. C. McNutt and A. B. Furman	7,732	June 12, 1877	536	164	11	1052
Plow, Gang	W. Fruhling	7,931	Oct. 30, 1877	1105	322	12	752
Plow-point, Reversible	M. M. Bowers	7,894	Sept. 25, 1877	955	286	12	559

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Plow, Rotary gang	J. K. Underwood	7,865	Aug. 28, 1877	1008	299, 300	12	392
Plow, Sulky	W. L. Casaday	7,943	Nov. 13, 1877	488	145	12	839
Plow, Sulky	B. Slusser	7,973	Nov. 27, 1877	1063	318	12	938
Post-office box	J. H. Beidler	7,623	Apr. 24, 1877	1156	352	11	733
Post-office box	W. H. Bramble	7,624	Apr. 24, 1877	1158	352	11	733
Post-office box	L. Yale, jr.	7,625	Apr. 24, 1877	1159	352	11	734
Preserving animal and vegetable substances, Composition for.	G. Henry	7,672	May 8, 1877	583		11	830
Printed paper, Machine for finishing	J. Morris	7,919	Oct. 23, 1877	877	252, 253	12	707
Printing-press delivery apparatus	T. J. Mayall	7,786	July 3, 1877	278	82	12	49
Pulley-block	G. A. Ford	7,671	May 8, 1877	582	172	11	830
Pump	R. M. Lafferty	7,677	May 15, 1877	862	255	11	874
Pump	R. M. Lafferty	7,678	May 15, 1877	863	256	11	874
Pump, Compound high and low pressure steam	A. J. L. Loretz	7,641	Apr. 24, 1877	1160	357	11	737
Pump-valve	R. M. Lafferty	6,676	May 15, 1877	862	255	11	874
Pump valve, Chain	O. O. Witherell	7,744	June 12, 1877	549	168	11	1053
Pumps, Piston for deep-well	C. Jarecki	7,792	July 17, 1877	786	241	12	134
Pyrometer	E. Brown	7,702	May 29, 1877	1443	434	11	966
R.							
Railway-frog	G. W. Billings	7,929	Oct. 30, 1877	1102	321	12	751
Railway, Pneumatic	W. H. Bailey	7,503	Feb. 13, 1877	536	165	11	285
Railway-rails, Apparatus for carrying	A. J. Gustin	7,898	Oct. 2, 1877	182	52	12	587
Railway-rails, Machine for slitting	J. Reese	7,680	May 15, 1877	865	256	11	875
Railway-switch	C. L. Cooke	7,690	May 22, 1877	1139	342	11	920
Railway-track	L. Hall	7,941	Nov. 6, 1877	241	72	12	794
Refrigerating-car	J. M. Ayer	7,467	Jan. 16, 1877	614	187, 188	11	103
Refrigerator	H. W. McKnight	7,965	Nov. 27, 1877	1053	315	12	937
Refrigerator-ship	J. F. Baldwin	9,872	Sept. 4, 1877	200	62	12	427
Regenerator-furnace	C. W. Siemens	7,863	Aug. 28, 1877	1004	297, 298	12	392
Regenerator-furnace valve	C. W. Siemens	7,864	Aug. 28, 1877	1007	298, 299	12	392
Retort-chargers, Measuring coal and feeding it to	T. F. Rowland	7,630	Apr. 24, 1877	1165	354	11	734
Retorts, Preventing the accumulation of carbon in	W. Karr	7,739	June 12, 1877	544		11	1053
Rock-drill	S. Ingersoll	7,473	Jan. 23, 1877	858	265	11	149
Rods and shafting, Machine for cold-drawing	G. H. Billings	7,868	Sept. 4, 1877	195	60	12	427
Rope-ways, Griping attachment for	A. S. Hallidie	7,607	Apr. 17, 1877	833	258	11	683
S.							
Saddle or sweat cloth	R. Spencer	7,557	Mar. 13, 1877	512	157	11	456
Safes, Door and hinge for burglar-proof	P. F. King	7,802	July 17, 1877	798	244	12	136
Saw, Circular	J. K. Lockwood	7,753	June 19, 1877	852	258	11	1105
Saw filer and setter	T. L. Shaw	7,632	Apr. 24, 1877	1168	354	11	735
Saw handle, Crosscut	J. Neimeyer	7,543	Feb. 27, 1877	1069	330	11	372
Saw-mill dog	T. Craney	7,453	Jan. 2, 1877	186	59	11	33
Saw-tang	E. M. Boynton	7,748	June 19, 1877	847	256	11	1104
Sawing machine, Circular	A. T. Nichols	7,871	Sept. 4, 1877	200	62	12	427
Sawing machine, Scroll	J. H. Plummer	7,725	June 5, 1877	225	71	11	1007
Sawing machine, Scroll	J. H. Plummer	7,726	June 5, 1877	226	71	11	1007
Scoops, Making wooden	R. Richardi	7,940	Nov. 6, 1877	240	72	12	794
Scraper, Road	F. W. Schulz	7,948	Nov. 13, 1877	498	147	12	839
Screw-blanks, Machine for nicking the heads of	H. A. Harvey	7,574	Mar. 27, 1877	1070	329, 330	11	549
Screw threading machine, Wood	H. A. Harvey	7,573	Mar. 27, 1877	1067	328, 329	11	548
Screws, Machine for shaving the heads of wood	H. A. Harvey	7,534	Feb. 27, 1877	1059	326, 327	11	371
Seal-lock	J. Dewe	7,666	May 8, 1877	575	171	11	829
Seal, Metallic	E. A. Locke	7,741	June 12, 1877	547	167	11	1053
Seeder and cultivator	W. A. Van Brunt	7,466	Jan. 16, 1877	611	187	11	103
Seeder and cultivator	W. A. Van Brunt	7,604	Apr. 10, 1877	545	170	11	638
Seeding-machine	C. E. Patrie	7,875	Sept. 4, 1877	204	63	12	428
Seeding-machine	G. W. Van Brunt	7,839	Aug. 7, 1877	240	70, 71	13	266
Seeding-machine	J. F. Winchell	7,926	Oct. 23, 1877	882	254	12	708
Sewing-machine	C. F. Bosworth	7,985	Dec. 11, 1877	477	150	12	1023
Sewing-machine	E. Bouscay, jr.	7,684	May 15, 1877	870	258	11	875
Sewing-machine	C. O. Crosby	7,986	Dec. 11, 1877	479	150	12	1023
Sewing-machine	J. Keats and W. S. Clark	7,806	July 24, 1877	1074	321, 322	12	181
Sewing-machine	S. S. Turner	7,459	Jan. 9, 1877	375	115, 116	11	66
Sewing-machine	R. Whitehill	7,762	June 19, 1877	860	260	11	1106
Sewing-machine cutting attachment	L. L. Barber	7,860	Aug. 28, 1877	994	295	12	391
Sewing-machine presser-foot	D. A. Sutherland	7,558	Mar. 13, 1877	513	158	11	456
Sewing-machine shuttle	R. H. St. John	7,615	Apr. 17, 1877	846	260	11	685
Sheet-metal can	H. Miller	7,682	May 15, 1877	868	257	11	875
Sheet-metal can	J. A. Wilson	7,923	Oct. 23, 1877	880	254	12	708
Sheet-metal, Machine for raising or flanging the edges of.	H. Fachs	7,849	Aug. 14, 1877	526	159	12	310
Shingles, Machine for pressing and bunching	P. Dexter	7,723	June 5, 1877	223	70	11	1007
Shoe-lacing fastening	G. Butterfield	7,921	Oct. 23, 1877	878	253	12	707
Shoe-nails, Manufacture of	L. W. Austin	7,530	Feb. 27, 1877	1055	325	11	371
Shuttle for weaving duck, &c.	W. L. Gilbert	7,776	July 3, 1877	266	78	12	48
Sign, Illuminating	C. H. Seawell	7,856	Aug. 21, 1877	759	225	12	349
Skate	O. Edwards	7,524	Feb. 20, 1877	787	244	11	327
Sleigh-knee	H. Francisco	7,812	July 24, 1877	1082	324	12	182
Slop-hopper	J. Marquis	7,679	May 15, 1877	864	256	11	875
Smoke-bells, Making	J. S. and T. B. Atterbury	7,747	June 19, 1877	845	256	11	1104
Smoke-consuming furnace	J. C. Baum	7,683	May 15, 1877	868	257	11	875

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Snap-hook	C. W. Blakeslee	7,893	Sept. 25, 1877	955	285	12	559
Soldering-machine	P. Dillon and J. Cleary	7,901	Oct. 2, 1877	188	53, 54	12	588
Sower, Seed	J. Pearce	7,734	June 12, 1877	539	165	11	1052
Sowing machine, Fertilizer	D. F. Hull	7,555	Mar. 13, 1877	509	157	11	455
Spark-arrester	F. M. Stevens	7,810	July 24, 1877	1080	323	12	181
Spark-arrester	F. M. Stevens	7,811	July 24, 1877	1081	333	12	182
Spark-arrester	J. N. Weaver	7,717	May 29, 1877	1456	437, 438	11	968
Spinning-machine bobbin and thread-holder	T. L. Luders	7,579	Mar. 27, 1877	1077	332	11	550
Spinning-machine ring	W. T. Carroll	7,575	Mar. 27, 1877	1072	330	11	549
Spinning-machine ring, Ring and traveler	J. W. Wattles	7,857	Aug. 21, 1877	760	225	12	349
Spinning-machine spindle-bearing	L. Cheetham	7,814	July 24, 1877	1085	324	12	182
Spoon and fork	L. S. White	7,699	May 22, 1877	1150	345	11	921
Spoon, Camp	P. Ulmer	7,925	Oct. 23, 1877	881	254	12	708
Stalk-cutting machine	J. M. Goff	7,469	Jan. 16, 1877	616	188	11	104
Stall for steam fire-engine houses, Horse	W. C. Davoll, jr	7,454	Jan. 2, 1877	187	57	11	33
Stamp feeder, Ore	J. Tullock	7,906	Oct. 9, 1877	391	112	12	624
Standards, Support for upright	J. Warner	8,010	Dec. 25, 1877	1063	323	12	1124
Steel, Tempering and forming articles of	G. F. Simonds	7,464	Jan. 16, 1877	608	186	11	103
Steel, Tempering and forming articles of	G. F. Simonds	7,465	Jan. 16, 1877	610	187	11	103
Stereoscope	A. Quirolo	7,622	Apr. 24, 1877	1155	351	11	733
Stone and other hard substances, Cutting	B. C. Tilghman	7,499	Feb. 6, 1877	291	95	11	241
Stove, Coal-oil	J. A. Frey	7,674	May 8, 1877	587	173	11	830
Stove, Coal-oil	J. A. Frey	7,751	June 19, 1877	850	257	11	1104
Stove, Cooking	N. A. Boynton	7,637	Apr. 24, 1877	1176	356	11	736
Stove, Gas	W. M. Jackson	7,474	Jan. 23, 1877	859	265	11	149
Stoves, Baker for heating	L. Drew	7,869	Sept. 4, 1877	196	60	12	427
Stoves, Composition for lining and repairing	L. R. Witherel	7,958	Nov. 20, 1877	761	226	12	888
Stoves, Fire-pot and grate for fire-place	H. L. McAvoy	7,550	Mar. 6, 1877	267	83	11	415
Stoves, Floor-protector for	F. J. Seymour	7,758	June 19, 1877	856	259	11	1105
Strap-machine	A. F. Stowe	7,760	June 19, 1877	857	259	11	1106
Straw-cutter	E. Wagoner	7,512	Feb. 13, 1877	545	167	11	286
Street-sprinkler	J. A. Bancroft	7,845	Aug. 14, 1877	523	158	12	310
Street-sprinkler	L. F. Bancroft	7,877	Sept. 11, 1877	462	138	12	473
Sugar, Centrifugal machine for draining	A. Fesca	7,455	Jan. 2, 1877	188	58	11	33
Syringe, Enema	F. B. Richardson	7,946	Nov. 13, 1877	492	146	12	839
Syringe, Flexible	M. Mattson	7,971	Nov. 27, 1877	1061	318	12	938
T.							
Table-fork	L. S. White	7,700	May 22, 1877	1151	345	11	921
Table forks and spoons, Manufacture of	L. S. White	7,633	Apr. 24, 1877	1170	354	11	735
Tackle-block	J. F. Harcourt	7,728	June 12, 1877	531	163	11	1051
Tank-regulator	A. Fuller	7,801	July 17, 1877	797	244	12	136
Tea, coffee, and other extracts, Device for making	J. Miller	7,883	Sept. 11, 1877	471	140	12	474
Tea, coffee, and other extracts, Making	J. Miller	7,882	Sept. 11, 1877	469	140	12	474
Telegraph, Printing	P. A. J. Dujardin	7,627	Apr. 24, 1877	1161	353	11	734
Telegraph, Printing	F. L. Pope and T. A. Edison	7,621	Apr. 17, 1877	854	262	11	686
Telegraph register, Fire-alarm	D. T. Phelps and C. W. Edmonds	7,888	Sept. 18, 1877	703	208, 209	12	515
Tempering, Furnace for heating steel in	J. B. Armstrong	7,644	May 1, 1877	292	86	11	784
Tempering sickle-sections, Machine for	S. F. Reynolds	7,563	Mar. 20, 1877	766	235	11	499
Temple-teeth, Machine for setting	N. Chapman	7,477	Jan. 30, 1877	1117	345, 346	11	192
Thrashing-machine	W. M. Leyde	7,731	June 12, 1877	535	164	11	1052
Ticket-box	E. Hambujer	7,842	Aug. 14, 1877	519	157	12	309
Time-lock	C. F. Atwood	7,966	Nov. 27, 1877	1054	316	12	937
Time-lock	J. Burge	7,858	Aug. 21, 1877	761	226	12	350
Time-lock	J. Sargent	7,835	Aug. 7, 1877	233	69	12	266
Time-lock, combination-lock, and bolt-work for safes, Combined.	J. Sargent	7,947	Nov. 13, 1877	493	146, 147	12	839
Tin can	R. Judson and J. P. Schenck, jr	7,490	Feb. 6, 1877	278	91	11	240
Tin plates, cans, &c., Decorating	J. Roussel, L. Delaugre, and L. Robin.	7,556	Mar. 13, 1877	510		11	455
Tire-heating apparatus	S. G. Reed	7,589	Apr. 3, 1877	278	90	11	594
Tobacco-pipe	B. Lorillard	7,693	May 22, 1877	1144	343	11	921
Tobacco-press	S. B. Minnich	7,945	Nov. 13, 1877	490	146	12	839
Tongs, Pipe	A. H. Jarecki	7,650	May 1, 1877	299	87		785
Torch, Gas	A. R. Weiss	7,975	Nov. 27, 1877	1065	319	12	938
Toy money-box	J. Hall	7,614	Apr. 17, 1877	845	260	11	685
Toy money-box	J. Hall	7,904	Oct. 9, 1877	389	112	12	624
Toy scroll-sawing machine	S. N. Trump	7,938	Nov. 6, 1877	238	71	12	793
Traction-engine	G. Rogers	7,736	June 12, 1877	541	166	11	1052
Tree-protector	D. P. Mathews	8,012	Dec. 25, 1877	1064	324	12	1124
Truck, Hook and ladder	J. Schmidlapp	7,520	Feb. 20, 1877	781	243	11	326
Truss, Hernia	L. T. J. Lubin	7,896	Sept. 25, 1877	957	286	12	560
Tube-packing	S. L. Fox	7,479	Jan. 30, 1877	1121	346	11	193
U.							
Umbrella-tip cup	O. M. Smith	7,572	Mar. 27, 1877	1066	327	11	548
Upholstering, Preparing vegetable fiber for	J. S. Cutter	7,668	May 8, 1877	577	171	11	830
V.							
Valve and gear for direct-acting engines	G. F. Blake	7,813	July 24, 1877	1083	324	12	182
Valve for water-cylinders, Relief	T. H. Bailey	7,886	Sept. 18, 1877	701	208	12	515
Valve-gear, Steam-engine	E. N. Dickerson	7,763	June 26, 1877	1091	330, 331	11	1149
Valve-gears for combined high-pressure and condensing engine	T. L. Jones	7,805	July 24, 1877	1072	321	12	181
Valves of city water-mains, Operating	H. P. B. Birkinbine	7,964	Nov. 27, 1877	1052	315	12	936
Vehicle-lamp support, Adjustable	T. Boudren	7,544	Mar. 6, 1877	259	81	11	414
Vehicle, Pleasure	C. W. Saladee	7,889	Sept. 18, 1877	705	209	12	516

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Invention or discovery.	Name of patentee.	No.	Date.	Monthly volume.		Official Gazette.	
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Vehicle, Pleasure	C. W. Saladee	7,890	Sept. 18, 1877	707	209	12	516
Vehicle-spring	L. A. Fogg	7,891	Sept. 18, 1877	709	209	12	516
Vehicle torsion-spring	C. W. Saladee	7,855	Aug. 21, 1877	758	225	12	349
Vehicles, Adjustable metallic dash for	G. M. Peters	7,789	July 10, 1877	528	159	12	92
Velocipede	P. Lallement	7,972	Nov. 27, 1877	1062	318	12	938
Velocipede	P. W. Mackenzie	7,818	July 31, 1877	1301	390	12	223
Ventilator	J. C. Bates	7,552	Mar. 13, 1877	505	156	11	455
W.							
Wagon-brake lever	J. W. Anderson	8,006	Dec. 25, 1877	1058	322	12	1123
Wagon-brake lever	P. Thomsen	7,880	Sept. 11, 1877	465	139	12	474
Wagon bound and tongue	C. F. Whipple	7,769	June 26, 1877	1100	333	11	1150
Washing-machine	G. H. Waldo	7,961	Nov. 20, 1877	764	227	12	888
Watch-key, Adjustable	J. S. Birch	7,911	Oct. 16, 1877	629	181	12	665
Watches, Regulating	C. Fasoldt	7,514	Feb. 20, 1877	774	241	11	325
Water-closet	W. S. Carr	7,626	Apr. 24, 1877	1160	352	11	734
Welding metal tubes, Machine for	S. P. M. Tasker	8,009	Dec. 25, 1877	1062	322 323	12	1123
Well, Driven or bored	J. E. Morrison	7,580	Mar. 27, 1877	1079	332	11	550
Well, Tube	T. J. Dean	7,721	June 5, 1877	220	69	11	1007
Wells, Casing-spear for oil	V. Gretter	7,841	Aug. 14, 1877	518	157	12	309
Wells, Rope-socket for oil	H. Badcock	7,719	June 5, 1877	218	69	11	1006
Whiffletree-iron	J. Irvine	7,804	July 24, 1877	1071	321	12	180
Window-screen	G. Reed, W. C. Heagland, and J. J. Newsom.	7,664	May 8, 1877	574	170	11	829
Wool, Treating mineral	A. D. Elbers	7,994	Dec. 18, 1877	760		12	1072
Wrench	B. C. Bradley	7,910	Oct. 16, 1877	629	181	12	664
Wringer	J. Brinkerhoff	7,861	Aug. 28, 1877	997	295	12	391
Y.							
Yarns, Composition for dressing cotton	W. H. Perkins	7,990	Dec. 11, 1877	487		12	1024

ALPHABETICAL LIST OF EXTENSIONS.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette.	
				Vol.	Page.
I.					
India-rubber and steel springs	E. T. Bussell		Oct. 6, 1877	12	
P.					
Paper-pulp, Reducing wood to	H. Voelter		Aug. 29, 1877	12	

ALPHABETICAL LIST OF DISCLAIMERS.

Invention or discovery.	Name of patentee.	Original No.	Original date.	Disclaimer filed.	Official Gazette.	
					Vol.	Page.
B.						
Bottle-stopper fastening	H. W. Putnam (Reissue)	1,606	Jan. 19, 1864	Jan. 19, 1877	11	114
F.						
Fare-box, Passenger. (Reissued May 4, 1858; again reissued January 24, 1871.)	J. B. Slawson	17,899	July 28, 1857	Sept. 6, 1877	12	397
P.						
Paper-pulp, Reducing wood to	H. Voelter (Reissue)	4,418	Aug. 10, 1858	Aug. 24, 1877	12	355
S.						
Sower and planter, Seed	E. G. Matthews	88,971	Apr. 13, 1869	Jan. 2, 1877	11	6
Steam-engine indicator	T. Minor and J. Rae	185,773	Dec. 26, 1876	Sept. 1, 1877	12	355
Stove	C. H. Frost (Reissue)	5,894	June 2, 1871	Jan. 15, 1877	11	40
V.						
Vehicle-axle	B. F. Richardson	183,706	Oct. 24, 1876	Feb. 5, 1877	11	199
W.						
Wash-board	J. M. Gorham	184,611	Nov. 21, 1876	Apr. 7, 1877	11	602

ALPHABETICAL LIST OF TRADE-MARKS.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
A.					
Abrasive cloth, paper, or leather	F. K. Sibley	4,429	Mar. 6, 1877	11	377
Acid phosphate	Rumford Chemical Works	4,793	June 26, 1877	11	1115
Agricultural implement and machine	Collins Company	5,448	Dec. 18, 1877	12	1028
Agricultural implement and machine	Collins Company	5,449	Dec. 18, 1877	12	1028
Agricultural implements	W. Frankfurth & Co	4,624	May 15, 1877	11	834
Agricultural implements	Manny & Co	4,824	July 3, 1877	12	8
Ale	I. Cook & Co	4,693	May 1, 1877	11	743
Ale	Galwey & Casado and A. D. Shaw	4,787	June 26, 1877	11	1115
Ale, porter, and brown-stout	J. Walker & Co	4,884	July 17, 1877	12	96
Alkali, Caustic	Pennsylvania Salt Manufacturing Company.	4,697	June 5, 1877	11	973
Aluminous compounds	C. W. Rogers & Co	4,262	Jan. 9, 1877	11	40
Animal-trap	C. Jones	5,116	Sept. 4, 1877	12	396
Axes	W. Mann, jr., & Co	5,220	Oct. 16, 1877	12	627
Axes and saws	W. Frankfurth & Co	4,888	July 17, 1877	12	96
Axle-grease	G. Potter, jr	5,223	Oct. 16, 1877	12	627
Axles and axle-boxes	Rubber Cushioned Axle Company	5,258	Oct. 23, 1877	12	669
B.					
Baking and yeast powders and yeast-cakes	Jewett & Sherman Company	4,716	June 12, 1877	11	1012
Baking-powder	American Lye Company	4,326	Jan. 30, 1877	11	155
Baking-powder	J. B. Anthony & Co	4,247	Jan. 2, 1877	11	6
Baking-powder	Dunham, Peckham & Co	4,688	May 29, 1877	11	927
Baking-powder	Fitts & Austin	4,896	July 17, 1877	12	96
Baking-powder	W. Haslage	5,379	Nov. 27, 1877	12	891
Baking-powder	Jewett & Sherman Company	4,789	June 26, 1877	11	1115
Baking-powder	Jewett & Sherman Company	4,790	June 26, 1877	11	1115
Baking-powder	Middleton & Brother	5,219	Oct. 16, 1877	12	627
Baking-powder	G. Rhorer	5,142	Sept. 11, 1877	12	432
Baking-powder	Rhorer, Christian & Co	4,532	Apr. 10, 1877	11	601
Baking-powder	Riverside Mills Company	4,978	July 31, 1877	12	190
Baking-powder	J. H. Sherwood	5,158	Sept. 18, 1877	12	479
Baking-powder	C. C. Warren & Co	4,598	May 1, 1877	11	742
Bale ties and materials	Laughland & Co	4,258	Jan. 9, 1877	11	40
Base-balls	L. H. Mahn	4,576	Apr. 24, 1877	11	691
Bed-quilts or comfortables	Palmer Brothers	4,531	Apr. 10, 1877	11	601
Beds, Sofa	H. F. Hover	5,047	Aug. 14, 1877	12	270
Beef compounds, Extract of	C. Delacre	4,574	Apr. 24, 1877	11	691
Beef, hams, breakfast-bacon, and shoulders, Dried	Meyer, Huschart & Co	4,973	July 31, 1877	12	190
Beef-juice, Concentrated	J. P. Bush	5,022	Aug. 14, 1877	12	270
Beer, Lager	E. Anheuser Company's Brewing Association.	4,623	May 8, 1877	11	791
Beer, Lager	Boca Brewing Company	4,513	Apr. 3, 1877	11	555
Beer, Lager	Hartmann Brothers	4,402	Feb. 27, 1877	11	332
Beer, Lager	G. F. Heublein & Brother	5,328	Nov. 20, 1877	12	843
Beer, Lager	A. Michenfelder	4,506	Mar. 27, 1877	11	505
Beer, Root	H. C. Litchfield & Co	4,808	July 3, 1877	12	8
Belting and lace-leather, Leather	C. A. Schieren	4,681	May 22, 1877	11	881
Beverage, Aromatic	P. Dornbusch	4,965	July 31, 1877	12	190
Beverage, Effervescent	M. S. Von Berg	4,742	June 12, 1877	11	1012
Beverages, Carbonated	Firm of John Matthews	5,171	Sept. 25, 1877	12	519
Beverages, Carbonated	Smith & Powell	4,959	July 24, 1877	12	140
Beverages, Prepared cereals for making table	A. M. Putnam	4,946	July 24, 1877	12	140
Beverages, Prepared cereals for making table	A. M. Putnam	5,272	Oct. 23, 1877	12	670
Beverages, Tonic	Bolen & Byrne	4,990	Aug. 7, 1877	12	230
Birch-mead	Schutt, Kelsey & Co	5,089	Aug. 28, 1877	12	354
Bird-cage	Hendryx & Bartholomew	4,272	Jan. 16, 1877	11	71
Bitters	G. Clark	4,294	Jan. 23, 1877	11	113
Bitters	M. Eisner	4,996	Aug. 7, 1877	12	230
Bitters	W. W. Henry	4,565	Apr. 17, 1877	11	643
Bitters	Johnston, Holloway & Co	4,999	Aug. 7, 1877	12	230
Bitters	T. E. Peck	4,898	July 17, 1877	12	96
Bitters	C. Thiet	4,693	May 29, 1877	11	927
Bitters	Young, Patterson & Co	5,083	Aug. 21, 1877	12	315
Bitters, Stomach	E. L. Betaux	5,109	Sept. 4, 1877	12	396
Blacking, boot and shoe dressing, and stove-polish	G. A. Moss	4,880	July 17, 1877	12	96
Blacking, Liquid	S. S. Newton & Co	4,926	July 24, 1877	12	139
Boiler tubes, Locomotive	National Tube Works Company	5,126	Sept. 4, 1877	12	397
Bone and ivory articles	C. J. Batee	4,988	Aug. 7, 1877	12	229
Books	Lee & Shepard	5,133	Sept. 11, 1877	12	432
Books	Lee & Shepard	5,153	Sept. 18, 1877	12	478
Boot and shoe dressing	G. H. Reed & Sons	5,088	Aug. 28, 1877	12	354
Boot and shoe soles	R. Pebbles	5,271	Oct. 23, 1877	12	670
Boots and shoes	Bay State Shoe and Leather Company	4,760	June 26, 1877	11	1114
Boots and shoes	P. Fischer	5,212	Oct. 16, 1877	12	627
Boots and shoes, Ladies'	J. H. Hapgood	4,357	Feb. 13, 1877	11	251
Boots and shoes, Rubber	National Rubber Company	5,173	Sept. 25, 1877	12	520
Boots and shoes, Water-proof dressing for	G. A. Peirce	5,238	Oct. 16, 1877	12	628
Boots, Rubber	Boston Rubber Shoe Company	5,010	Aug. 7, 1877	12	230
Borax	Smith Brothers	4,368	Feb. 13, 1877	11	251
Bottles, Nursing	Whitall, Tatum & Co	4,542	Apr. 17, 1877	11	642
Boxes	R. Sneider	5,308	Nov. 13, 1877	12	798

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Brandies and wines	Renauld, François & Co	5,007	Aug. 7, 1877	12	230
Brandy	L. Durland & Co	4,437	Mar. 13, 1877	11	421
Brandy	O. Jackson & Brother	5,053	Aug. 21, 1877	12	314
Brandy	Martell & Co	4,317	Jan. 30, 1877	11	155
Brandy	Martell & Co	4,318	Jan. 30, 1877	11	155
Brandy	Martell & Co	4,319	Jan. 30, 1877	11	155
Bread preparation	Rumford Chemical Works	4,566	Apr. 17, 1877	11	643
Brick and tile and furnace-blocks made of fire-clay, Fire	Gardner, Stuart & Co	4,269	Jan. 16, 1877	11	71
Bronzes	Tiffany & Co	4,638	May 15, 1877	11	834
Brooms	P. A. Dailey	4,762	June 26, 1877	11	1114
Brooms	R. W. English	4,645	May 15, 1877	11	834
Brushes	J. L. Whiting	4,265	Jan. 9, 1877	11	40
Bustles, paniers, or train-supporters	L. Schiele & Co	4,821	July 3, 1877	12	8
Butter	Constable & Co	4,515	Apr. 3, 1877	11	555
Butter	Elgin Butter Company	4,895	July 17, 1877	12	96
Butter	J. Stewart	4,948	July 24, 1877	12	140
Butter	P. H. Van Riper & Co	5,413	Dec. 11, 1877	12	982
Butter	P. H. Van Riper & Co	5,414	Dec. 11, 1877	12	982
Butter, Preparation for coloring	Wells, Richardson & Co	4,910	July 17, 1877	12	97
Button	City Button Works	5,037	Aug. 14, 1877	12	270
Button-holders	G. J. Stoeks	4,894	July 17, 1877	12	96
Buttons	J. Levi	5,181	Sept. 25, 1877	12	520
Buttons	W. L. Palmer	5,360	Nov. 20, 1877	12	844
Buttons	Saugatuck Manufacturing Company	4,285	Jan. 16, 1877	11	71
Buttons and dress-trimmings	L. Rothschild	4,366	Feb. 13, 1877	11	251
C.					
Calico-prints	Freeman Manufacturing Company	5,112	Sept. 4, 1877	12	396
Candy	E. Greenfield & Son	5,344	Nov. 20, 1877	12	844
Canned and dried corn	C. E. Sears & Co	5,084	Aug. 21, 1877	12	315
Canned and preserved fruits and vegetables	Stevens & Groom	4,264	Jan. 9, 1877	11	40
Canned apples	Erie Preserving Company	4,287	Jan. 23, 1877	11	113
Canned fish-chowder	W. Underwood & Co	5,418	Dec. 11, 1877	12	982
Canned fruits and vegetables	Elstun, Orange & Co	4,797	July 3, 1877	12	8
Canned fruits and vegetables	Gadd & Sudler	5,025	Aug. 14, 1877	12	270
Canned goods	Githens & Rexsamer	5,377	Nov. 27, 1877	12	891
Canned goods	Thompson, Fry & Co	5,130	Sept. 4, 1877	12	397
Canned lobsters	Burnham & Morrill	4,962	July 31, 1877	12	190
Canned meats	N. K. Fairbank Company	5,234	Oct. 16, 1877	12	627
Canned oysters	C. S. Maltby	5,236	Oct. 16, 1877	12	628
Canned oysters	G. E. Maltby & Co	5,192	Oct. 2, 1877	12	5
Canned oysters	Moore & Brady	4,300	Jan. 23, 1877	11	113
Canned oysters, fruits, and vegetables	J. G. Kraft & Co	5,330	Nov. 20, 1877	12	844
Canned oysters, fruits, and vegetables	C. S. Maltby	5,237	Oct. 16, 1877	12	628
Canned salmon	Fitzpatrick, Davis & Co	5,078	Aug. 21, 1877	12	314
Canned tomatoes	A. Anderson	4,885	July 17, 1877	12	96
Capsule	R. G. Dick	5,186	Oct. 2, 1877	12	5
Car, Railway	J. Gamgee	5,391	Dec. 4, 1877	12	942
Caramels and other confectionery	Powell & Coleman	4,778	June 26, 1877	11	1114
Card-board, Perforated	Dreyfuss & Sache	4,963	July 31, 1877	12	190
Card, Playing	V. E. Mauger	5,191	Oct. 2, 1877	12	5
Cards, Playing	V. C. Clayton	5,038	Aug. 14, 1877	12	270
Cards, Playing	A. Dougherty	4,886	July 17, 1877	12	96
Cards, Playing	V. E. Mauger	4,809	July 3, 1877	12	8
Cards, Playing	J. D. D. Mortimer	4,349	Feb. 6, 1877	11	199
Cards, Playing	New York Consolidated Card Company	5,138	Sept. 11, 1877	12	432
Cards, Playing	New York Consolidated Card Company	5,340	Nov. 20, 1877	12	844
Cards, Playing	New York Consolidated Card Company	5,341	Nov. 20, 1877	12	844
Cards, Playing	New York Consolidated Card Company	5,342	Nov. 20, 1877	12	844
Carpet-warps, Cotton	W. S. Baker	5,200	Oct. 9, 1877	12	36
Carriage-axles	Cleveland Axle Manufacturing Company.	4,695	June 5, 1877	11	973
Carriage-robes	T. Goodall	5,376	Nov. 27, 1877	12	891
Cement	E. J. Bramhall	4,661	May 22, 1877	11	880
Cereals	Cereals Manufacturing Company	4,912	July 17, 1877	12	97
Cereals, Steam-cooked	A. Hornby	5,027	Aug. 14, 1877	12	270
Champagne and cognac	J. Glaenzer & Co	5,079	Aug. 21, 1877	12	314
Champagne wine	F. De Bary & Co	4,459	Mar. 20, 1877	11	461
Champagne wine	Heidsieck & Co	5,113	Sept. 4, 1877	12	396
Champagne wine	Heidsieck & Co	5,114	Sept. 4, 1877	12	396
Champagne wine	Kunkelmann & Co	4,536	Apr. 17, 1877	11	642
Champagne wine	Kunkelmann & Co	4,537	Apr. 17, 1877	11	642
Champagne wine	Kunkelmann & Co	4,538	Apr. 17, 1877	11	642
Champagne wine	Kunkelmann & Co	4,539	Apr. 17, 1877	11	642
Champagne wine	Kunkelmann & Co	4,540	Apr. 17, 1877	11	642
Champagne wine	Kunkelmann & Co	4,588	May 1, 1877	11	742
Champagne wine	Kunkelmann & Co	4,589	May 1, 1877	11	742
Champagne wine	Kunkelmann & Co	4,718	June 12, 1877	11	1012
Champagne wine	Moët & Chandon	5,055	Aug. 21, 1877	12	314
Champagne wine	Moët & Chandon	5,056	Aug. 21, 1877	12	314
Champagne wine	G. H. Mumm	4,484	Mar. 27, 1877	11	504
Champagne wine	G. H. Mumm & Co	4,473	Mar. 20, 1877	11	461
Champagne wine	Werlé & Co	4,816	July 3, 1877	12	8
Champagne wine	Werlé & Co	4,817	July 3, 1877	12	8
Champagne wine	Werlé & Co	5,065	Aug. 21, 1877	12	314
Champagne wine	Werlé & Co	5,066	Aug. 21, 1877	12	314
Champagne wine	Werlé & Co	5,071	Aug. 21, 1877	12	314
Champagne wine, Moët & Chandon	Renauld, François & Co	5,057	Aug. 21, 1877	12	314
Cheese	J. H. Hodgson	5,189	Oct. 2, 1877	12	5
Chest-protector	W. H. Schieffelin & Co	4,460	Dec. 25, 1877	12	1078
Cheviots	McKeen & Raphael	4,528	Apr. 10, 1877	11	601
Chilled rolls and rolls of other material	J. M. Poole & Co	4,486	Mar. 27, 1877	11	504

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Cider, Bottled	S. S. Pierce & Co	4,911	July 17, 1877	12	97
Cigar	M. H. Benjamin	4,452	Dec. 25, 1877	12	1078
Cigar	S. I. Posner & Bro	5,440	Dec. 18, 1877	12	1027
Cigar	M. Riquelme	5,412	Dec. 11, 1877	12	982
Cigar	I. Teichman	5,450	Dec. 18, 1877	12	1028
Cigar	B. F. Weyman	5,400	Dec. 4, 1877	12	943
Cigar-boxes	P. Schneider	4,928	July 24, 1877	12	139
Cigar-boxes	W. Wicke & Co	4,831	July 3, 1877	12	9
Cigar-boxes	W. Wicke & Co	5,139	Sept. 11, 1877	12	432
Cigar, cigarette, and smoking-tobacco	Straiton & Storm	5,442	Dec. 18, 1877	12	1027
Cigars	E. Aschermann & Co	4,922	July 24, 1877	12	139
Cigars	Baum Brothers	4,452	Mar. 20, 1877	11	460
Cigars	B. F. Beckman	5,021	Aug. 14, 1877	12	270
Cigars	L. Cohn	5,372	Nov. 27, 1877	12	891
Cigars	A. J. Crawford	4,916	July 17, 1877	12	97
Cigars	J. L. Davis & Son	4,870	July 17, 1877	12	96
Cigars	J. M. Davis	5,362	Nov. 27, 1877	12	891
Cigars	J. M. Davis	5,363	Nov. 27, 1877	12	891
Cigars	J. M. Davis	5,364	Nov. 27, 1877	12	891
Cigars	L. Dessauer & Co	5,050	Aug. 21, 1877	12	314
Cigars	M. J. Dougherty	4,843	July 1, 1877	12	95
Cigars	F. A. Ford	4,356	Feb. 13, 1877	11	251
Cigars	Freiberg, Klein & Co	5,140	Sept. 11, 1877	12	432
Cigars	G. Fuchs	4,499	Mar. 27, 1877	11	505
Cigars	S. Fuguet & Sons	4,767	June 26, 1877	11	1114
Cigars	A. Greenhall	4,770	June 26, 1877	11	1114
Cigars	Hall, Blair & Co	4,564	Apr. 17, 1877	11	643
Cigars	Hantsch & Crouse	4,648	May 15, 1877	11	834
Cigars	S. Heinsheim & Bro	4,555	Apr. 17, 1877	11	643
Cigars	Heyman Brothers & Lowenstein	5,122	Sept. 4, 1877	12	387
Cigars	E. Hilson	5,365	Nov. 27, 1877	12	891
Cigars	D. Hirsch & Co	4,743	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,744	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,745	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,746	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,747	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,748	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,749	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,750	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,751	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,752	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,753	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,754	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,755	June 19, 1877	11	1063
Cigars	D. Hirsch & Co	4,756	June 19, 1877	11	1063
Cigars	L. Hirschhorn & Co	4,358	Feb. 13, 1877	11	251
Cigars	Huau & Co	4,344	Feb. 6, 1877	11	199
Cigars	H. R. Kelly	4,503	Mar. 27, 1877	11	505
Cigars	Levy Brothers	4,773	June 26, 1877	11	1114
Cigars	Levy Brothers	5,081	Aug. 21, 1877	12	315
Cigars	G. P. Lies & Co	4,387	Feb. 20, 1877	11	291
Cigars	S. Lowenthal & Co	4,469	Mar. 20, 1877	11	461
Cigars	S. Lowenthal & Co	4,470	Mar. 20, 1877	11	461
Cigars	S. Lowenthal & Co	5,168	Sept. 25, 1877	12	519
Cigars	F. W. Marburg	4,708	June 5, 1877	11	973
Cigars	M. C. McDonald	4,521	Apr. 3, 1877	11	555
Cigars	M. C. McDonald & Co	4,558	Apr. 17, 1877	11	643
Cigars	Moore, Jenkins & Co	4,736	June 12, 1877	11	1012
Cigars	H. Muller	5,099	Aug. 28, 1877	12	354
Cigars	G. Rahnstadt	4,444	Mar. 13, 1877	11	421
Cigars	P. Rosello	4,428	Mar. 6, 1877	11	371
Cigars	Seidenberg & Co	4,562	Apr. 17, 1877	11	643
Cigars	F. Smith	4,947	July 24, 1877	12	140
Cigars	F. Smith	5,301	Nov. 6, 1877	12	757
Cigars	Smith & Rising	5,093	Aug. 28, 1877	12	354
Cigars	Straiton & Storm	4,781	June 26, 1877	11	1114
Cigars	Straiton & Storm	4,862	July 17, 1877	12	95
Cigars	S. Straus	4,893	July 17, 1877	12	96
Cigars	R. S. Strobel	5,193	Oct. 2, 1877	12	5
Cigars	R. S. Strobel	5,256	Oct. 23, 1877	12	669
Cigars	R. S. Strobel	5,257	Oct. 23, 1877	12	669
Cigars	Sullivan & Burk	4,494	Mar. 27, 1877	11	504
Cigars	I. Teichman	5,128	Sept. 4, 1877	12	397
Cigars	Teuscher & Gernsheimer	5,137	Sept. 11, 1877	12	432
Cigars	H. K. & F. B. Thurber & Co	5,146	Sept. 11, 1877	12	432
Cigars	R. Vega	4,950	July 24, 1877	12	140
Cigars	Warnick & Brown	4,863	July 17, 1877	12	96
Cigars	D. Whalen	4,599	May 1, 1877	11	742
Cigars	S. T. Willets & Co	5,199	Oct. 2, 1877	12	6
Cigars	S. T. Willets & Co	5,245	Oct. 16, 1877	12	620
Cigars	M. A. Wolf	4,960	July 24, 1877	12	140
Cigars and cigarettes	G. W. Faber	5,111	Sept. 4, 1877	12	396
Cigars and cigarettes	D. Hirsch & Co	4,802	July 3, 1877	12	8
Cigars and cigarettes	Holzmann & Deutschberger	4,806	July 3, 1877	12	8
Cigars and cigarettes	M. W. Mendel & Brother	4,811	July 3, 1877	12	8
Cigars and cigarettes	M. W. Mendel & Brother	4,812	July 3, 1877	12	8
Cigars and cigarettes	Moore, Jenkins & Co	4,822	July 3, 1877	12	8
Cigars and cigarettes	Moore, Jenkins & Co	5,155	Sept. 18, 1877	12	478
Cigars and cigarettes	J. Schmitt	4,815	July 3, 1877	12	8
Cigars and tobacco	V. Martinez Ybor & Co	4,443	Mar. 13, 1877	12	421
Cigars and tobacco	Straiton & Storm	4,291	Jan. 23, 1877	11	113
Cigars and tobacco	P. J. Sullivan	4,279	Jan. 16, 1877	11	71
Cigars, cigarettes, and cheroots	D. W. De Forest	4,992	Aug. 7, 1877	12	230
Cigars, cigarettes, and chewing and smoking tobacco	S. Orgler	5,222	Oct. 16, 1877	12	627

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Cigars, cigarettes, and cigarros	S. Jacoby & Co	5,366	Nov. 27, 1877	12	891
Cigars, cigarettes, and smoking and chewing tobacco	G. Fuchs	5,247	Oct. 23, 1877	12	669
Cigars, cigarettes, and smoking and chewing tobacco	E. C. Hazard & Co	5,294	Nov. 6, 1877	12	757
Cigars, cigarettes, and smoking and chewing tobacco	M. Hilson	5,266	Oct. 23, 1877	12	670
Cigars, cigarettes, and smoking and chewing tobacco	Lozano, Pendas & Co	5,269	Oct. 23, 1877	12	670
Cigars, cigarettes, and smoking and chewing tobacco	J. H. Page	5,307	Nov. 13, 1877	12	798
Cigars, cigarettes, and smoking and chewing tobacco	E. A. Smith	4,461	Dec. 25, 1877	12	1078
Cigars, cigarettes, and smoking and chewing tobacco	E. A. Smith	4,462	Dec. 25, 1877	12	1078
Cigars, cigarettes, and smoking and chewing tobacco	Straiton & Storm	4,949	July 24, 1877	12	140
Cigars, cigarettes, and smoking-tobacco	G. Fuchs	5,211	Oct. 16, 1877	12	627
Cigars, cigarettes, and smoking-tobacco	J. Hirsch	5,097	Aug. 28, 1877	12	354
Cigars, cigarettes, and smoking-tobacco	Straiton & Storm	5,031	Aug. 14, 1877	12	270
Cigars, cigarettes, and smoking-tobacco	Straiton & Storm	5,032	Aug. 14, 1877	12	270
Cigars, cigarettes, and smoking-tobacco	Straiton & Storm	5,194	Oct. 2, 1877	12	5
Cigars, cigarettes, and smoking-tobacco	Straiton & Storm	5,195	Oct. 2, 1877	12	5
Cigars, cigarettes, and tobacco	Lichtenstein Brothers & Co	4,315	Jan. 30, 1877	11	155
Cigars, cigarettes, cheroots, chewing and smoking tobacco	Kimball, Gaullier & Co	5,348	Nov. 20, 1877	12	844
Cigars, cigarettes, cheroots, smoking and chewing tobacco	Kimball, Gaullier & Co	5,347	Nov. 20, 1877	12	844
Cigars, cigarettes, chewing and smoking tobacco	Lichtenstein Brothers	4,891	July 17, 1877	12	96
Cigars cigarettes, chewing and smoking tobacco	Lichtenstein Brothers & Co	4,889	July 17, 1877	12	96
Cigars, cigarettes, chewing and smoking-tobacco	Lichtenstein Brothers & Co	4,890	July 17, 1877	12	96
Cigars, cigarettes, cigarros, and smoking tobacco	S. Foguet & Sons	5,121	Sept. 4, 1877	12	397
Cigars, cigarettes, smoking and chewing tobacco	J. M. Davis	5,095	Aug. 28, 1877	12	354
Cigars, cigarettes smoking and chewing tobacco	F. A. Ford	4,845	July 17, 1877	12	95
Cigars, cigarettes, smoking and chewing tobacco, and snuff	McCoy & Co	4,813	July 3, 1877	12	8
Cigars, cigarettes, tobacco, and snuff	P. Pohalski	4,290	Jan. 23, 1877	11	113
Cigars, cigarros, and cigarettes	R. C. Brown	4,761	June 26, 1877	11	1114
Cigarette boxes and packages	P. Thourault & Co	4,286	Jan. 16, 1877	11	71
Cigarettes	M. Friedman	4,553	Apr. 17, 1877	11	642
Cigarettes	M. Friedman	5,096	Aug. 28, 1877	12	354
Cigarettes	T. H. Hall	4,731	June 12, 1877	11	1012
Cigarettes	W. S. Kimball & Co	4,590	May 1, 1877	11	742
Cigarettes	W. S. Kimball & Co	4,651	May 15, 1877	11	834
Cigarettes	W. S. Kimball & Co	4,669	May 22, 1877	11	880
Cigarettes	F. S. Kinney	4,464	Mar. 20, 1877	11	461
Cigarettes	A. Moonelis	5,172	Sept. 25, 1877	12	519
Cigarettes	C. B. Perkins	4,579	Apr. 24, 1877	11	691
Cigarettes	H. Pohalski	4,561	Apr. 17, 1877	11	643
Cigarettes, cigars, and cheroots	J. Blakely	4,659	May 22, 1877	11	880
Cleaning and polishing compound	A. C. Emerick	4,836	July 10, 1877	12	54
Cleansing compound	Masury, Young & Co	4,529	Apr. 10, 1877	11	601
Cleansing preparation	E. M. Coffield	4,602	May 1, 1877	11	743
Clock	F. Kroeber	5,409	Dec. 11, 1877	12	982
Clock	F. Kroeber	5,417	Dec. 11, 1877	12	982
Clock	F. Kroeber	5,419	Dec. 11, 1877	12	982
Clocks, Alarm	H. J. Davies	4,763	June 26, 1877	11	1114
Cloth, &c., Liquid for removing grease and other stains from	G. P. Tapling	4,475	Mar. 20, 1877	11	461
Cloths and woolens	E. T. Steele & Co	5,255	Oct. 23, 1877	12	669
Coal	Iowa and Missouri Coal and Land Company.	5,380	Nov. 27, 1877	12	891
Coal	W. H. S. Miller	4,944	July 24, 1877	12	140
Coca, Preparation of	H. M. Smith	5,044	Aug. 14, 1877	12	270
Cod-liver oil	H. and C. Retton	4,288	Jan. 23, 1877	11	113
Coffee	Davis, Sacker & Perkins	4,606	May 1, 1877	11	743
Coffee, Roasted	D. Focht & Co	4,765	June 26, 1877	11	1114
Coffee, Roasted	D. Focht & Co	4,766	June 26, 1877	11	1114
Coffee, Roasted	G. Ogden & Co	4,945	July 24, 1877	12	140
Coffee, Roasted	A. Stephens' Son	5,091	Aug. 28, 1877	12	354
Coffee, Roasted	A. Stephens' Son	5,092	Aug. 28, 1877	12	354
Coffee, Roasted	Weikel & Smith Spice Company	4,830	July 3, 1877	12	9
Coffee, Roasted and ground	Barkley & Hasson	4,266	Jan. 16, 1877	11	70
Coffee, Roasted and ground	Barkley & Hasson	4,986	Aug. 7, 1877	12	229
Coffee, Roasted and ground	Barkley & Hasson	4,987	Aug. 7, 1877	12	229
Coffee, tea, &c., Apparatus for making extracts of	Pressure Extract Company	5,336	Nov. 20, 1877	12	844
Collar-box	Tifft & Howard	4,329	Jan. 30, 1877	11	155
Collars and cuffs	E. J. Frost	4,525	Apr. 10, 1877	11	601
Collars and cuffs	Strahan, Hodgson & Co	4,899	July 17, 1877	12	97
Collars and cuffs	Washington Manufacturing Company.	5,274	Oct. 23, 1877	12	670
Collars, cuffs, and bosoms	Reversible Collar Company	4,654	May 15, 1877	11	834
Collars, Linen	Miller & Bingham	4,735	June 12, 1877	11	1012
Cologne	E. W. Hoyt & Co	5,048	Aug. 14, 1877	12	270
Cologne	C. Lubrecht	5,218	Oct. 16, 1877	12	627
Cologne	A. B. Taylor	4,882	July 17, 1877	12	96
Cologne water	Caswell, Hazard & Co	4,875	July 17, 1877	12	96
Cologne water	J. M. Farina	5,263	Oct. 23, 1877	12	670
Cologne water	J. M. Farina	5,264	Oct. 23, 1877	12	670
Cologne water	J. M. Farina	5,265	Oct. 23, 1877	12	670
Coloring matter	Nürnberger Ultramarin Fabrik	5,291	Oct. 30, 1877	12	717
Confectionery	Flohr, Hymers & Co	4,411	Feb. 27, 1877	11	333
Copies of writings, &c., Apparatus and materials for multiplying.	W. H. W. Campbell	4,495	Mar. 27, 1877	11	504
Cordage	E. H. Fitler & Co	4,844	July 1, 1877	12	95
Cordial, designated "Schnapps"	J. B. Wolfe	5,119	Sept. 4, 1877	12	397
Corn and bunion cure	E. J. Bramhall	4,662	May 22, 1877	11	880
Corn-starch	Chicago Starch Works	5,063	Aug. 21, 1877	12	314
Corn-starch	H. H. Lndeman	4,346	Feb. 6, 1877	11	199
Corsets	M. L. Corley	4,905	July 17, 1877	12	97
Corsets	D. H. Fanning	4,923	July 24, 1877	12	139
Corsets	D. H. Fanning	4,924	July 24, 1877	12	139
Corsets	D. H. Fanning	4,925	July 24, 1877	12	139
Corsets	Mayer, Stronse & Co	4,504	Mar. 27, 1877	11	505
Cosmetic	W. Hunt	4,517	Apr. 3, 1877	11	555
Cosmetic	F. F. Marshall	5,394	Dec. 4, 1877	12	943
Cosmetic	R. F. Payne	4,738	June 12, 1877	11	1012

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Cosmetic, Liquid	J. Burnett	4,435	Mar. 13, 1877	11	421
Cosmetics	Howard, Sanger & Co	4,878	July 17, 1877	12	96
Cosmetics	M. A. Russell	4,739	June 12, 1877	11	1012
Cotton batting	Le Van, La Roche & Gritman	4,314	Jan. 30, 1877	11	154
Cotton fabrics	Amoskeag Manufacturing Company	4,415	Mar. 6, 1877	11	376
Cotton-gins	O. W. Massey	5,205	Oct. 9, 1877	12	36
Cotton goods	Field, Leiter & Co	4,673	May 22, 1877	11	880
Cotton yarn	S. M. Hamilton	5,433	Dec. 18, 1877	12	1027
Cough-candy	Richardson & Co	5,385	Nov. 27, 1877	12	891
Cough-sirup	N. P. Philo	4,918	July 17, 1877	12	97
Croquet apparatus	A. Angell	4,543	Apr. 17, 1877	11	642
Croup, Preparation for the cure of	J. Roach	4,427	Mar. 6, 1877	11	377
Cutlery	Theile & Quack	4,741	June 12, 1877	11	1012
Cutlery	F. Wiebusch	4,309	Jan. 23, 1877	11	113
D.					
Dental fillings	S. S. White	4,535	Apr. 10, 1877	11	601
Dentifrice	T. Egersdorf	4,453	Dec. 25, 1877	12	1078
Dentifrice	J. R. Finney	4,454	Dec. 25, 1877	12	1078
Dentifrice	C. E. Fougera	4,730	June 12, 1877	11	1012
Dentifrice	C. Lubrecht	5,367	Nov. 27, 1877	12	891
Dentifrice	F. M. Osborn	4,424	Mar. 6, 1877	11	377
Dentifrice, Liquid	Hall & Ruckel	5,249	Oct. 23, 1877	12	669
Dentifrices	M. A. Carman	5,303	Nov. 13, 1877	12	798
Dentifrices	R. O. Moses	5,019	Aug. 7, 1877	12	230
Dentifrices	Steele & Price	4,263	Jan. 9, 1877	11	40
Dentifrices	C. Suez	5,224	Oct. 16, 1877	12	627
Deodorizing and disinfectant preparation	Crooks & Hatcher	4,785	June 26, 1877	11	1114
Disinfectant and deodorizer	L. A. Wilder	5,399	Dec. 4, 1877	12	943
Door and gate springs	Van Wagoner & Williams	4,450	Mar. 13, 1877	11	422
Dress-goods	Passavant & Co	4,321	Jan. 30, 1877	11	155
Dress-goods	Passavant & Co	4,944	July 24, 1877	12	140
Dress-goods	Passavant & Co	4,955	July 24, 1877	12	140
Dress-goods, Ladies'	C. S. and J. P. Jones	5,002	Aug. 7, 1877	12	230
Drugs and medicines	Caswell, Hazard & Co	4,874	July 17, 1877	12	96
Dry-goods	D. A. Lindsay	4,361	Feb. 13, 1877	11	251
E.					
Eau de Cologne	G. Jáques	4,274	Jan. 16, 1877	11	71
Edible products of a packing-house	Newton & Richardson	4,507	Mar. 27, 1877	11	505
Electric priming or paint	P. O'Brien	5,261	Oct. 23, 1877	12	670
Emery-wheels and grinding machinery in which they are used	E. C. Burgess	5,154	Sept. 25, 1877	12	519
Envelopes and letter-paper	L. C. Styles	4,412	Feb. 27, 1877	11	333
Extracts for the handkerchief and colognes	F. A. Marsh	5,382	Nov. 27, 1877	12	891
F.					
Felt fabrics, Striped or figured	E. Waite	4,449	Mar. 13, 1877	11	421
Felts, Roofing and sheathing	Warren Chemical and Manufacturing Company.	4,548	Apr. 17, 1877	11	642
Fence strips and caps	C. L. Topliff	4,597	May 1, 1877	11	742
Fence strips and caps	C. L. Topliff	4,684	May 22, 1877	11	881
Fertilizer	J. Arrington & Sons	4,511	Apr. 3, 1877	11	555
Fertilizer	J. Arrington & Sons	4,512	Apr. 3, 1877	11	555
Fertilizer	G. Dambmann	4,382	Feb. 20, 1877	11	291
Fertilizer	Singer & Breban	4,474	Mar. 20, 1877	11	461
Fertilizers	Baldwin & Co	4,618	May 8, 1877	11	791
Fertilizers	G. Dambmann	4,295	Jan. 23, 1877	11	113
Fertilizers	Lake Guano and Shell Fertilizer Company.	4,792	June 26, 1877	11	1115
Fertilizers	Lane & Johnston	4,420	Mar. 6, 1877	11	376
Fertilizers	J. R. Long & Co	5,235	Oct. 16, 1877	12	647
Fertilizers	Popplein Silicated Phosphate Fertilizer Company.	4,322	Jan. 30, 1877	11	155
Fertilizers	M. L. Shoemaker & Co	5,337	Nov. 20, 1877	12	844
Fertilizing compound	Boyken, Carmer & Co	4,660	May 22, 1877	11	880
Fire-escape and life-preserving apparatus	H. R. Houghton	4,696	June 5, 1877	11	973
Fish and meats, Packed and preserved	J. O. Hanthorn & Co	5,421	Dec. 11, 1877	12	982
Fish, Cured	J. J. Stanwood	4,861	July 17, 1877	12	95
Fish, Packages of fresh	S. H. Davis & Co	5,284	Oct. 30, 1877	12	717
Fish, Prepared and packed	E. G. Nickerson	4,406	Feb. 27, 1877	11	332
Fishing-lines	Pratt & Farmer	4,592	May 1, 1877	11	742
Fishing-tackle	Abbey & Imbrie	5,207	Oct. 16, 1877	12	627
Flannel, Cotton	J. V. Farwell & Co	5,179	Sept. 25, 1877	12	520
Flannels, Cotton	Field, Leiter & Co	4,851	July 17, 1877	12	96
Flannels made of cotton	Lawrence Manufacturing Company	4,672	May 22, 1877	11	880
Flavoring extracts	Royal Baking Powder Company	4,927	July 24, 1877	12	139
Flint, sand, emery, and match papers and cloths	Wiggin & Stevens	4,951	July 24, 1877	12	140
Flour	N. Brooke	4,569	Apr. 24, 1877	11	691
Flour	N. Brooke	4,570	Apr. 24, 1877	11	691
Flour	N. Brooke	4,727	June 12, 1877	11	1012
Flour	N. Brooke	4,864	July 17, 1877	12	96
Flour	J. Dunn	5,178	Sept. 25, 1877	12	520
Flour	Empire Mill Company	4,887	July 17, 1877	12	96
Flour	F. W. Jenkins & Brother	5,052	Aug. 21, 1877	12	314
Flour	I. G. Jenkins and J. Hover	4,667	May 22, 1877	11	880
Flour	Jenkins & Hover	4,518	Apr. 3, 1877	11	555
Flour	Jenkins & Hover	4,519	Apr. 3, 1877	12	555
Flour	Jenkins & Hover	4,953	July 24, 1877	12	140
Flour	Jenkins & Hover	5,028	Aug. 14, 1877	12	270
Flour	S. S. Marvin & Co	4,557	Apr. 17, 1877	11	643
Flour	S. S. Marvin & Co	4,776	June 26, 1877	11	1114

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Flour	S. S. Marvin & Co	5,169	Sept. 25, 1877	12	519
Flour	Morehead Manufacturing Company	4,856	July 17, 1877	12	95
Flour	A. L. Murdock	5,043	Aug. 14, 1877	12	270
Flour	B. R. Pegram, jr	5,006	Aug. 7, 1877	12	230
Flour	F. Schumacher	5,009	Aug. 7, 1877	12	230
Flour	F. E. Smith & Co	4,838	July 10, 1877	12	54
Flour	Warder & Barnett	5,313	Nov. 13, 1877	12	798
Flour	Warder & Barnett	5,315	Nov. 13, 1877	12	798
Flour	Woodward & Dwight	5,226	Oct. 16, 1877	12	627
Fluid, Burning	Gorrell & Parkison	5,432	Dec. 18, 1877	12	1027
Fluting-machine	S. R. Knox	4,359	Feb. 13, 1877	11	251
Food for horses and cattle, Spiced	J. O. Boyle	5,203	Oct. 9, 1877	12	36
Food for horses, cattle, poultry, and stock generally	Condimental Food Company	4,370	Feb. 13, 1877	11	251
Food-preserving compound	C. G. Am. Ende	5,177	Sept. 25, 1877	12	520
Food-supplement for horses and other animals, Concentrated	J. M. Richards & Co	4,977	July 31, 1877	12	190
Foot-salve	H. Norman	5,221	Oct. 16, 1877	12	627
Fruits and vegetables, Preserved	Farmers' Fruit Preserving Company	5,015	Aug. 7, 1877	12	230
G.					
Gentlemen's furnishing-goods	Fechheimer, Goodkind & Co	4,268	Jan. 16, 1877	11	71
Gin	J. Hinds	5,187	Oct. 2, 1877	12	5
Gin	Ives, Beecher & Co	4,273	Jan. 16, 1877	11	71
Gin	J. D. Park	4,392	Feb. 20, 1877	11	291
Gin	J. D. Park	5,206	Oct. 9, 1877	12	36
Gin	Walden, Whitten & Co	5,034	Aug. 14, 1877	12	270
Ginger, Extract of	J. K. Ish	4,771	June 26, 1877	11	1114
Glassware	E. D. Dithridge	5,039	Aug. 14, 1877	12	270
Gloves	Tréfousse & Co	4,585	Apr. 24, 1877	11	691
Gloves	Tréfousse & Co	4,586	Apr. 24, 1877	11	691
Gloves, Kid	Tréfousse & Co	4,711	June 5, 1877	11	973
Gloves, Kid	Tréfousse & Co	4,712	June 5, 1877	11	973
Glue, Prepared	Hall & Ruckel	5,250	Oct. 23, 1877	12	669
Grain-cleaning machinery	C. Duprez et Cie	5,304	Nov. 13, 1877	12	798
Grape-juice	M. E. Ogborn	4,253	Jan. 2, 1877	11	6
Gun and sporting implements	S. Glover and B. L. Budd	4,500	Mar. 27, 1877	11	505
Gunpowder	Oriental Powder Mills	4,302	Jan. 23, 1877	11	113
Gunpowder	Oriental Powder Mills	4,303	Jan. 23, 1877	11	113
Gunpowder	Oriental Powder Mills	4,362	Feb. 13, 1877	11	251
H.					
Hair-dye	A. Connelly	5,110	Sept. 4, 1877	12	396
Hair-dye	J. J. Ralya	5,369	Nov. 27, 1877	12	891
Hair goods	N. Helmer	5,277	Oct. 30, 1877	12	717
Hair goods, Ladies'	M. E. Thompson	4,703	June 5, 1877	11	973
Hair preparation	Caswell, Hazard & Co	4,873	July 17, 1877	12	96
Hair preparation	Caswell, Hazard & Co	4,877	July 17, 1877	12	96
Hair preparation	M. E. Johnson	4,345	Feb. 6, 1877	11	199
Hams	T. R. Jenkins & Son	5,213	Oct. 16, 1877	12	627
Hams	D. C. Link	5,358	Nov. 20, 1877	12	844
Hams, lard, and other pork products	Watts, Parker & Co	4,883	July 17, 1877	12	96
Hams, Sugar-cured	T. R. Jenkins & Son	4,275	Jan. 16, 1877	11	71
Harvesters and mowers	J. F. Seiberling	4,595	May 1, 1877	11	742
Hat	R. A. Hooper & Co	5,251	Oct. 23, 1877	12	669
Hat and cap	C. Knox	5,252	Oct. 23, 1877	12	669
Hats and bonnets	Tweedy Manufacturing Company	5,386	Nov. 27, 1877	12	891
Hats and caps	A. Jacobs	4,556	Apr. 17, 1877	11	643
Heaters, stoves, and heating-pipe	H. Purdy	4,859	July 17, 1877	12	95
Hermetically-sealed butter	G. W. Simpson	5,183	Sept. 25, 1877	12	520
Hermetically-sealed oysters, vegetables, and fruits	L. W. Counselman	5,046	Aug. 14, 1877	12	270
Hoes	Union Manufacturing Company	4,931	July 24, 1877	12	139
Hoes, Iron and cast-steel	G. T. Lane	4,940	July 24, 1877	12	139
Hog-cholera medicine	A. P. Charles	5,045	Aug. 14, 1877	12	270
Hog-cholera remedy	C. R. Martin	4,775	June 26, 1877	11	1114
Horse and animal shoe nails	Globe Nail Company	4,937	July 24, 1877	12	139
Horseshoe-nails	W. M. Mooney & Co	5,280	Oct. 30, 1877	12	717
Horseshoes	H. K. Flagler	4,401	Feb. 27, 1877	11	332
Hose, Rubber	New York Belting and Packing Company.	5,100	Aug. 28, 1877	12	354
Hosiery and gloves	Firm of Maurice Samuel Esche	4,372	Feb. 13, 1877	11	251
Hosiery and gloves	Firm of Maurice Samuel Esche	4,373	Feb. 13, 1877	11	251
Hot-air furnaces	I. A. Sheppard & Co	5,182	Sept. 25, 1877	12	520
I.					
Ice	J. Gamgee	5,390	Dec. 4, 1877	12	942
Ice chamber, Artificial	J. Gamgee	5,392	Dec. 4, 1877	12	942
India-rubber goods	Goodyear Rubber Company	5,286	Oct. 30, 1877	12	717
Inks	Sanford Manufacturing Company	5,241	Oct. 16, 1877	12	628
J.					
Jewelry	Franklin Jewelry Company	5,242	Oct. 16, 1877	12	628
Jewelry and watches	Tiffany & Co	4,637	May 15, 1877	11	834
K.					
Knitting-cotton	M. B. Ochs	4,985	July 31, 1877	12	191
Kümmel or cordial	Firm of J. A. Gilka	4,374	Feb. 13, 1877	11	251
L.					
Lamp-burner	F. H. Lovell	4,289	Jan. 23, 1877	11	113

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Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Lamp-burner	Wilmot Manufacturing Company	5,395	Dec. 4, 1877	12	943
Lamp-chimney	F. H. Lovell & Co	4,299	Jan. 23, 1877	11	113
Lamp, Night	E. Rorke & Co	5,176	Sept. 25, 1877	12	520
Lamp-shade holders	R. Douglas & Co	4,826	July 3, 1877	12	9
Lamps	G. H. Lomax	4,360	Feb. 13, 1877	11	251
Lamps	L. H. Olmsted	4,560	Apr. 17, 1877	11	643
Lard	Cazade, Crooks & Reynaud	4,267	Jan. 16, 1877	11	71
Laundry preparation	S. Livingston	5,349	Nov. 20, 1877	12	844
Lead, White	Anchor White Lead Company	5,326	Nov. 20, 1877	12	843
Lead, White	Chicago White Lead and Oil Company	4,333	Feb. 6, 1877	11	198
Lead, White	Chicago White Lead and Oil Company	4,334	Feb. 6, 1877	11	198
Lead, White	Chicago White Lead and Oil Company	4,335	Feb. 6, 1877	11	198
Lead, White	Chicago White Lead and Oil Company	4,336	Feb. 6, 1877	11	198
Lead, White	Chicago White Lead and Oil Company	4,337	Feb. 6, 1877	11	198
Lead, White	Chicago White Lead and Oil Company	4,338	Feb. 6, 1877	11	198
Lead, White	Chicago White Lead and Oil Company	4,339	Feb. 6, 1877	11	198
Lead, White	Chicago White Lead and Oil Company	4,342	Feb. 6, 1877	11	199
Lead, White	Eckstein, Hills & Co	4,906	July 17, 1877	12	97
Lead, White	Heath & Milligan	4,384	Feb. 20, 1877	11	291
Lead, White	Heath & Milligan	4,385	Feb. 20, 1877	11	291
Lead, White	Southern White Lead Company	4,720	June 12, 1877	11	1012
Lead, White	Whittier, Fuller & Co	5,361	Nov. 20, 1877	12	844
Lead, Zinc-white	Chicago White Lead and Oil Company	4,332	Feb. 6, 1877	11	198
Leather	A. Rumsey	5,107	Aug. 28, 1877	12	354
Lemonade, Concentrated or condensed	Bussing & Haddon	4,834	July 10, 1877	12	54
Licorice-paste	Zuricalday & Arguimbau	4,640	May 15, 1877	11	834
Lime, Composition of superphosphate of	C. V. Mapes	4,347	Feb. 6, 1877	11	199
Linen fabrics	G. Riggs	5,143	Sept. 11, 1877	12	432
Liniment	Clark, Cook & Co	4,496	Mar. 27, 1877	11	504
Liniment	W. M. Giles & Co	4,690	May 29, 1877	11	927
Liniment	W. L. Keller	4,908	July 17, 1877	12	97
Liniment	A. J. Laubach	4,879	July 17, 1877	12	96
Liniment	Morley Brothers	5,352	Nov. 20, 1877	12	844
Liniment	Smith, Kline & Co	4,701	June 5, 1877	11	973
Liniments	D. Whiting	4,376	Feb. 13, 1877	11	252
Liquors and spirits	E. Cusenier Fils Aîné & Co	4,457	Mar. 20, 1877	11	460
Liquors and spirits	E. Cusenier Fils Aîné & Co	4,458	Mar. 20, 1877	11	460
Liquors and wines, Spirituous	D. Hirsch	4,805	July 3, 1877	12	8
Liquors and wines, Spirituous	B. J. Semmes & Co	4,981	July 31, 1877	12	190
Liquors, Compound for fining, purifying, and mellowing spirituous.	W. & P. Thompson	4,683	May 22, 1877	11	881
Liquors, Malt	C. Wolters	5,013	Aug. 7, 1877	12	230
Lubricating compound	S. E. Mandel	4,614	May 8, 1877	11	791
Lumber, except shingles, All sawed	Wetzell Brothers	5,159	Sept. 18, 1877	12	479
Lye and potash	E. Lauferty	5,217	Oct. 16, 1877	12	627
M.					
Macaroni	A. Stephani & Co	5,030	Aug. 14, 1877	12	270
Malt, Extract of	Trommer Extract of Malt Company	4,655	May 15, 1877	11	834
Marbleized wood and other marbleized fibrous materials	Moody, Putnam & Co	4,737	June 12, 1877	11	1012
Match, Friction	Barber Match Company	5,429	Dec. 18, 1877	12	1027
Matches	Robinson, Lord & Co	4,442	Mar. 13, 1877	11	421
Matches	Swift & Courtney & Beecher Company	4,702	June 5, 1877	11	973
Meat, &c., Concentrated extracts of	Blanchard Food Cure Company	5,201	Oct. 9, 1877	12	36
Meats and sausages, Preserved	E. J. Harbour	5,267	Oct. 23, 1877	12	670
Meats, Smoked	F. A. Ferris & Co	5,276	Oct. 30, 1877	12	717
Medical compound	G. C. Barclay	4,451	Mar. 20, 1877	11	460
Medical compound	G. C. Barclay	4,642	May 15, 1877	11	834
Medical compound	W. W. Bartlett & Co	4,413	Mar. 6, 1877	11	376
Medical compound	D. E. Becker	5,282	Oct. 30, 1877	12	717
Medical compound	E. J. Benton & Co	4,544	Apr. 17, 1877	11	642
Medical compound	J. Carnrick	4,480	Mar. 27, 1877	11	504
Medical compound	A. G. Catron	4,257	Jan. 9, 1877	11	40
Medical compound	W. E. Chester & Co	4,400	Feb. 27, 1877	11	332
Medical compound	J. M. Connell	5,402	Dec. 11, 1877	12	982
Medical compound	Cooke & Co	4,991	Aug. 7, 1877	12	230
Medical compound	Coussens & Tabler	4,456	Mar. 20, 1877	11	460
Medical compound	Coussens & Tabler	4,479	Mar. 27, 1877	11	504
Medical compound	Coussens & Tabler	4,904	July 17, 1877	12	97
Medical compound	T. Curran	4,819	July 3, 1877	12	8
Medical compound	D. D. Daniels & Co	4,481	Mar. 27, 1877	11	504
Medical compound	Davis & Haydock	5,024	Aug. 14, 1877	12	270
Medical compound	D. Dick	4,714	June 12, 1877	11	1012
Medical compound	C. Gigault	4,438	Mar. 13, 1877	11	421
Medical compound	Greene, Lindley & Bentley	4,968	July 31, 1877	12	190
Medical compound	J. Houriet	4,897	July 17, 1877	12	96
Medical compound	Kennedy & Co	5,436	Dec. 18, 1877	12	1027
Medical compound	S. C. La Bau	4,252	Jan. 2, 1877	11	6
Medical compound	Lawson Chemical Company	5,331	Nov. 20, 1877	12	844
Medical compound	L. B. Lord	4,774	June 26, 1877	11	1114
Medical compound	J. B. Marchisi	4,719	June 12, 1877	11	1012
Medical compound	Merriam & Frost	5,135	Sept. 11, 1877	12	432
Medical compound	C. J. Moffett	5,005	Aug. 7, 1877	12	230
Medical compound	Novelty Chemical Company	5,439	Dec. 18, 1877	12	1027
Medical compound	J. D. Park	4,260	Jan. 9, 1877	11	40
Medical compound	J. D. Park	4,261	Jan. 9, 1877	11	40
Medical compound	C. Paxson	5,270	Oct. 23, 1877	12	670
Medical compound	R. V. Pierce	4,956	July 24, 1877	12	140
Medical compound	R. V. Pierce	4,957	July 24, 1877	12	140
Medical compound	R. V. Pierce	4,974	July 31, 1877	12	190
Medical compound	J. Roberts	4,306	Jan. 23, 1877	11	113
Medical compound	S. T. W. Sanford	4,493	Mar. 27, 1877	11	504

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Medical compound	C. Sawyer	4,633	May 15, 1877	11	834
Medical compound	R. E. Sellers & Co	4,278	Jan. 16, 1877	11	71
Medical compound	J. Sterling	4,459	Dec. 25, 1877	12	1078
Medical compound	D. Stowell and C. S. Clerke	4,458	Dec. 25, 1877	12	1078
Medical compound	M. A. Thedford & Co	4,408	Feb. 27, 1877	11	332
Medical compound	E. K. Thompson	4,328	Jan. 30, 1877	11	155
Medical compound	H. A. Tilden	4,920	July 17, 1877	12	97
Medical compound	Wallace & Postlewait	4,351	Feb. 6, 1877	11	199
Medical compound	E. R. Wilbur	5,012	Aug. 7, 1877	12	230
Medical compound, Fluid	J. J. Grindall	5,026	Aug. 14, 1877	12	270
Medical compounds	A. H. Vordick	5,033	Aug. 14, 1877	12	270
Medical preparation	S. E. Ashley	4,685	May 29, 1877	11	927
Medical preparation	N. K. Brown	4,989	Aug. 7, 1877	12	230
Medical preparation	E. F. Brush & Co	4,256	Jan. 9, 1877	11	40
Medical preparation	J. Carnrick	4,379	Feb. 20, 1877	11	291
Medical preparation	D. Dick	4,417	Mar. 6, 1877	11	376
Medical preparation	Hegeman & Co	5,393	Dec. 4, 1877	12	943
Medical preparation	Himrod Manufacturing Company	5,115	Sept. 4, 1877	12	396
Medical preparation	A. Kiefer	4,520	Apr. 3, 1877	11	555
Medical preparation	J. Linden	4,820	July 3, 1877	12	8
Medical preparation	E. Livermore	5,437	Dec. 18, 1877	12	1027
Medical preparation	C. H. Phillips	4,580	Apr. 24, 1877	11	691
Medical preparation	G. Pierce & Co	4,653	May 15, 1877	11	834
Medical preparation	J. M. Richards & Co	4,976	July 31, 1877	12	190
Medical preparations	S. H. Kennedy	4,970	July 31, 1877	12	190
Medical preparations	V. E. Mauger	4,810	July 3, 1877	12	8
Medical preparations	S. T. Walcott	5,323	Nov. 13, 1877	12	799
Medicated electric plasters	Bell, Mann & Co	4,316	Jan. 30, 1877	11	155
Medicated pads for the cure of rheumatism	P. Heuckendorff	5,268	Oct. 23, 1877	12	670
Medicinal compound	O. Ellison	4,798	July 3, 1877	12	8
Medicinal compound	J. A. Heintzelman	4,849	July 17, 1877	12	95
Medicinal compound	Johnston, Holloway & Co	5,000	Aug. 7, 1877	12	230
Medicinal compound	Johnston, Holloway & Co	5,001	Aug. 7, 1877	12	230
Medicinal compound	M. L. Lee	5,287	Oct. 30, 1877	12	717
Medicinal compound or balsam, Fluid	J. A. Rogers	5,283	Oct. 30, 1877	12	717
Medicinal food	G. J. Wenck	4,915	July 17, 1877	12	97
Medicinal food known as "Imperial granum"	E. Heaton	4,706	June 5, 1877	11	973
Medicinal food known as "Imperial granum"	E. Heaton	4,707	June 5, 1877	11	973
Medicinal preparation	G. F. Badger	4,759	June 26, 1877	11	1114
Medicinal preparation	J. Curtis & Sons	5,165	Sept. 25, 1877	12	519
Medicinal preparation	D. Dick	5,404	Dec. 11, 1877	12	982
Medicinal preparation	P. Jeffers	5,141	Sept. 11, 1877	12	432
Medicinal preparation	A. Kiefer	4,668	May 22, 1877	11	880
Medicinal preparation	Lafferty & Co	4,943	July 24, 1877	12	140
Medicinal preparation	O. G. Moses	5,289	Oct. 30, 1877	12	717
Medicinal preparation	S. N. Smith	4,393	Feb. 20, 1877	11	291
Medicinal preparation	J. D. Thorndike	4,914	July 17, 1877	12	97
Medicinal preparation	J. H. Zeilin & Co	5,427	Dec. 11, 1877	12	982
Medicinal preparation, Fluid	A. Vogeler & Co	5,108	Aug. 28, 1877	12	354
Medicinal preparations	R. Cotter & Co	4,381	Feb. 20, 1877	11	291
Medicinal preparations	Dr. D. Jayne & Son	4,903	July 17, 1877	12	97
Medicinal preparations for animals	J. S. Talbot	4,783	June 26, 1877	11	1114
Medicinal preparations, Homeopathic	C. T. Hurlburt	5,087	Aug. 28, 1877	12	354
Medicinal purposes, Water for	Congress and Empire Spring Company	4,282	Jan. 16, 1877	11	71
Medicinal purposes, Water for	Congress and Empire Spring Company	4,283	Jan. 16, 1877	11	71
Medicinal purposes, Waters for	Congress and Empire Spring Company	4,280	Jan. 16, 1877	11	71
Medicinal purposes, Waters for	Congress and Empire Spring Company	4,281	Jan. 16, 1877	11	71
Medicinal saleratus	B. T. Babbitt	5,228	Oct. 16, 1877	12	627
Medicinal-spring water	Earl & Gamage	4,729	June 12, 1877	11	1012
Medicinal troches	B. E. Hutchinson	4,313	Jan. 30, 1877	11	154
Medicinal waters	J. M. Adams	5,094	Aug. 28, 1877	12	354
Medicine	R. V. Pierce	4,487	Mar. 27, 1877	11	504
Medicine	R. V. Pierce	4,488	Mar. 27, 1877	11	504
Medicine	R. Van Buskirk	5,396	Dec. 4, 1877	12	943
Medicine	J. H. Zeilin & Co	5,259	Oct. 23, 1877	12	669
Medicine-case of ready-compounded prescriptions	Dr. Hubbard & Co	4,872	July 17, 1877	12	96
Medicine, Croup	Warnick & Reid	5,148	Sept. 11, 1877	12	432
Medicine for the cure of kidney and bladder diseases	McHugh & Johnson	5,423	Dec. 11, 1877	12	982
Medicine, Hog-cholera	W. A. Reddick	5,175	Sept. 25, 1877	12	520
Medicine, Liver	J. G. Webb & Co	5,415	Dec. 11, 1877	12	982
Medicines	Dr. A. W. Chase, Son & Co	4,663	May 22, 1877	11	880
Medicines	J. R. Nelson	4,301	Jan. 23, 1877	11	113
Medicines	J. T. Reed & Co	4,594	May 1, 1877	11	742
Medicines, Hog	W. D. Scott	4,541	Apr. 17, 1877	11	642
Medicines inclosed in capsules	D. Dick	4,728	June 12, 1877	11	1012
Medicines put up in capsules	D. Dick	4,917	July 17, 1877	12	97
Medicines, Veterinary	G. J. Busteed	4,398	Feb. 27, 1877	11	332
Metallic fasteners	G. W. McGill	5,321	Nov. 13, 1877	12	799
Milk, Purified and condensed	S. W. Canfield	4,547	Apr. 17, 1877	11	642
Milk, Purified and condensed	S. W. Canfield	4,572	Apr. 24, 1877	11	691
Mineral water	A. Apollinarisbrunnen	5,445	Dec. 18, 1877	12	1028
Mineral water	A. Saxlehner	5,144	Sept. 11, 1877	12	432
Mineral water and mass	Bedford Alum and Iodine Springs Company.	5,035	Aug. 14, 1877	12	270
Mineral water known as "Vichy"	Saratoga Vichy Spring Company	4,619	May 8, 1877	11	791
Mineral waters and salts	Company Fermiere of the Thermal Establishment of Vichy.	5,014	Aug. 7, 1877	12	230
Molasses-gates	G. S. Lincoln & Co	5,003	Aug. 7, 1877	12	230
Moss, Prepared	F. Duffour	4,993	Aug. 7, 1877	12	230
Mower, Lawn	Carr & Hobson	4,795	July 3, 1877	12	8
Mustard and spices, Ground	P. Jackson & Co	4,772	June 26, 1877	11	1114

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
O.					
Oatmeal, cracked corn, cracked wheat, pearl barley, and farina.	Quaker Mill Company	5,118	Sept. 4, 1877	12	397
Oatmeal, cracked wheat, hominy, and samp	Bogle & Lyles	5,020	Aug. 14, 1877	12	270
Oil-cloths	T. Potter, Sons & Co	5,161	Sept. 18, 1877	12	479
Oil, Cod-liver	Caswell, Hazard & Co	4,876	July 17, 1877	12	96
Oil, Cod-liver	T. Metcalf & Co	5,319	Nov. 13, 1877	12	799
Oil, Illuminating	P. C. Atwood	4,248	Jan. 2, 1877	11	6
Oil, Illuminating	P. J. Fitzgerald & Co	4,549	Apr. 17, 1877	11	642
Oil, Illuminating	W. L. Teter	4,616	May 8, 1877	11	791
Oil, Kerosene	A. C. Dietz & Co	5,275	Oct. 30, 1877	12	717
Oil, Lubricating	E. K. Chamberlin	4,355	Feb. 13, 1877	11	251
Oil, Lubricating	W. H. D. Chapin	5,420	Dec. 11, 1877	12	982
Oil, Lubricating	Ilsley, Doubleday & Co	5,408	Dec. 11, 1877	12	982
Oil of peppermint	Fritzsche Brothers	5,285	Oct. 30, 1877	12	717
Oil, Olive	Caswell, Hazard & Co	4,573	Apr. 24, 1877	11	691
Oil, Olive	D. St. Amant & Son	4,394	Feb. 20, 1877	11	291
Oil, Olive	D. St. Amant & Son	4,395	Feb. 20, 1877	11	291
Oil or burning-fluid, Illuminating	W. E. Sewell	5,309	Nov. 13, 1877	12	798
Oil, Sewing-machine	Colby, Hutchins & Co	5,150	Sept. 18, 1877	12	478
Oil, Wool	Masury, Young & Co	5,170	Sept. 25, 1877	12	519
Oils, Essential	H. G. Hotchkiss	4,463	Mar. 20, 1877	11	461
Ointment or salve	H. F. Fairbrother	4,715	June 12, 1877	11	1012
Optical instrument	J. B. Laurençot	5,297	Nov. 6, 1877	12	757
Organs	E. P. Needham & Son	4,577	Apr. 24, 1877	11	691
Organs	F. G. Smith	4,447	Mar. 13, 1877	11	421
Organs, &c., Artificial ivory keys for	Smith American Organ Company	4,909	July 17, 1877	12	97
Organs, Reed	J. Estey & Co	4,997	Aug. 7, 1877	12	230
Organs, Reed	Whitney & Raymond	5,131	Sept. 4, 1877	12	397
Overcoats	J. Paret	4,857	July 17, 1877	12	95
Oysters	Haas Brothers	5,407	Dec. 11, 1877	12	982
Oysters, fruits, and vegetables, Packed	Smith & Wicks	5,338	Nov. 20, 1877	12	844
P.					
Packing-joints of steam-engines and for other purposes, Compound for.	S. J. Gordon	4,390	Feb. 20, 1877	11	291
Packing, Steam and hydraulic	A. Schwartz	4,533	Apr. 10, 1877	11	601
Paint	Gutta Percha Paint Company	5,296	Nov. 6, 1877	12	757
Paint, Copper	J. A. Orr	4,423	Mar. 6, 1877	11	377
Paint, Green	Chicago White Lead and Oil Company	4,340	Feb. 6, 1877	11	198
Paint, Green	Chicago White Lead and Oil Company	4,341	Feb. 6, 1877	11	198
Paint, Iron	P. D. Nicole	4,485	Mar. 27, 1877	11	504
Paint, Mixed gloss	J. W. Walker, Brothers & Co	4,721	June 12, 1877	11	1012
Paint, White	J. H. Chadwick & Co	4,842	July 17, 1877	12	95
Paints	Harrison Brothers & Co	4,343	Feb. 6, 1877	11	199
Paints	Harrison Brothers & Co	4,608	May 1, 1877	11	743
Paints	Harrison Brothers & Co	4,609	May 1, 1877	11	743
Paints	Heath & Milligan	4,383	Feb. 20, 1877	11	291
Paints	Heath & Milligan	4,386	Feb. 20, 1877	11	291
Paints	Standard Oil Paint Company	5,184	Sept. 25, 1877	12	520
Paints, Liquid	Harrison Brothers & Co	4,482	Mar. 27, 1877	11	504
Paints, Mixed	A. H. Holden & Co	4,607	May 1, 1877	11	743
Paints, Prepared	Heath & Milligan	4,807	July 3, 1877	12	8
Paints, Prepared	Heath & Milligan	5,051	Aug. 21, 1877	12	314
Painters, Size for house and fresco	D. Rosenberg & Sons	5,239	Oct. 16, 1877	12	628
Paper	Crane & Co	5,373	Nov. 27, 1877	12	891
Paper and envelopes, Note	Morgan Envelope Company	4,472	Mar. 20, 1877	11	461
Paper and envelopes, Writing	Morgan Envelope Company	5,017	Aug. 7, 1877	12	230
Paper collar	Cleveland Collar Company	4,687	May 29, 1877	11	927
Paper collars	Cleveland Collar Company	4,865	July 17, 1877	12	96
Paper collars	Cleveland Collar Company	4,866	July 17, 1877	12	96
Paper collars	Cleveland Collar Company	4,867	July 17, 1877	12	96
Paper collars	Cleveland Collar Company	5,209	Oct. 16, 1877	12	627
Paper collars	G. Harrington	4,462	Mar. 20, 1877	11	461
Paper collars	J. L. Libby	4,441	Mar. 13, 1877	11	421
Paper collars	J. L. Libby	4,466	Mar. 20, 1877	11	461
Paper collars	J. L. Libby	4,467	Mar. 20, 1877	11	461
Paper collars	J. L. Libby	4,468	Mar. 20, 1877	11	461
Paper collars	S. W. H. Ward's Sons	4,389	Feb. 20, 1877	11	291
Paper, linen cloth, &c., Machine for cutting	Dooley Manufacturing Company	5,327	Nov. 20, 1877	12	843
Paper, Writing	F. H. Dunkinson & Co	4,833	July 3, 1877	12	9
Paper, Writing	Holyoke Paper Company	5,180	Sept. 25, 1877	12	520
Paper, Writing	J. Q. Preble & Co	4,837	July 10, 1877	12	54
Paste, Adhesive	A. L. Shipman's Sons	5,353	Nov. 20, 1877	12	844
Pen and pocket knives	John Russell Cutlery Company	4,593	May 1, 1877	11	742
Pen-holders	J. A. Swasey	4,740	June 12, 1877	11	1012
Pens	Perry & Co	5,281	Oct 30, 1877	12	717
Pens, pencils, pen-holders, and rubber erasers	Joseph Dixon Crucible Company	4,635	May 15, 1877	11	834
Pens, pencils, pen-holders, and rubber erasers	Joseph Dixon Crucible Company	4,636	May 15, 1877	11	834
Pens, Steel	J. Gillott & Sons	4,352	Feb. 6, 1877	11	199
Pens, Steel	J. Gillott & Sons	4,625	May 15, 1877	11	834
Pens, Steel	J. Gillott & Sons	5,204	Oct. 9, 1877	12	36
Pencils, Lead	Eagle Pencil Company	5,040	Aug. 14, 1877	12	270
Pencils, Lead	Eagle Pencil Company	5,262	Oct. 23, 1877	12	670
Pencils, Lead	Eagle Pencil Company	5,305	Nov. 13, 1877	12	798
Perfume	T. M. Biddle	4,397	Feb. 27, 1877	11	332
Perfume known as "Florida Water"	W. E. Masten	4,854	July 17, 1877	12	95
Perfumes	D. G. Strawn	4,432	Mar. 6, 1877	11	377
Perfumery	G. Jáques	4,587	May 1, 1877	11	742
Perfumery	E. Meyer & Co	4,675	May 22, 1877	11	880
Perfumery	Young, Ladd & Coffin	4,932	July 24, 1877	12	139
Perfumery	Young, Ladd & Coffin	5,106	Aug. 28, 1877	12	354

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Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Pessaries, Ring	R. H. Kline	5,329	Nov. 20, 1877	12	843
Petroleum	W. H. Crossman & Brother	5,374	Nov. 27, 1877	12	891
Petroleum	W. H. Crossman & Brother	5,375	Nov. 27, 1877	12	891
Petroleum-oil, Product of	Binghamton Oil Refining Company	5,446	Dec. 18, 1877	12	1028
Petroleum-oil, Refined	E. Wickes	4,524	Apr. 3, 1877	11	555
Petroleum or coal oils	Wellman, Peck & Co	4,858	July 17, 1877	12	95
Petroleum, Refined	W. H. Crossman & Brother	5,430	Dec. 18, 1877	12	1027
Petroleum, Refined	Haas Brothers	4,847	July 17, 1877	12	95
Petroleum, Refined	Haas Brothers	4,848	July 17, 1877	12	95
Petroleum, Refined	C. Pratt & Co	5,424	Dec. 11, 1877	12	982
Pharmaceutical preparation	W. M. Olliffe	4,913	July 17, 1877	12	97
Photographic pictures	B. T. Irish	4,969	July 31, 1877	12	190
Piano-fortes	J. P. Hale	4,271	Jan. 16, 1877	11	71
Piano-fortes	H. F. Miller	5,288	Oct. 30, 1877	12	717
Piano-fortes	Simpson & Co	5,090	Aug. 28, 1877	12	354
Piano-fortes	F. G. Smith	4,446	Mar. 13, 1877	11	421
Piano-fortes	F. G. Smith	4,448	Mar. 13, 1877	11	421
Piano-fortes	R. W. Smith	4,929	July 24, 1877	12	139
Piano-fortes	R. W. Smith	4,930	July 24, 1877	12	139
Pianos	Ehrich & Co	4,644	May 15, 1877	11	834
Pickle	R. A. Gray	5,406	Dec. 11, 1877	12	982
Picture-frames	L. Pattberg & Brothers	4,610	May 1, 1877	11	743
Pictures, Decalcomanie transfer	C. Palm & Co	4,489	Mar. 27, 1877	11	504
Pictures or representations of devices printed in colors	Firm of O. Radde	4,327	Jan. 30, 1877	11	155
Pills	E. R. Post & Co	4,425	Mar. 6, 1877	11	377
Pills, Chill and fever	W. W. Brownfield	5,163	Sept. 25, 1877	12	519
Pills, Fever and ague	Groves & Lowry	5,405	Dec. 11, 1877	12	982
Pills for biliousness, constipation, &c	G. D. Coaney	5,120	Sept. 4, 1877	12	397
Pills, Liver	A. W. Chase, Son & Co	5,049	Aug. 21, 1877	12	313
Pins	Oakville Company	4,259	Jan. 9, 1877	11	40
Pins, Safety	W. A. Butler	4,571	Apr. 24, 1877	11	691
Plaiting-machine	D. Miller	5,042	Aug. 14, 1877	12	270
Plaster	V. C. & C. V. King	4,276	Jan. 16, 1877	11	71
Plated ware	Reed & Barton	4,305	Jan. 23, 1877	11	113
Plated ware	Rogers & Brother	4,632	May 15, 1877	11	834
Plated ware, Articles of	Reed & Barton	4,254	Jan. 2, 1877	11	6
Plow	Ames Plow Company	5,185	Oct. 2, 1877	12	5
Plows	J. L. Reed & Co	4,304	Jan. 23, 1877	11	113
Pocket and other knives	J. W. Gardner	4,418	Mar. 6, 1877	11	376
Polishing material	E. Morgan's Sons Co	5,320	Nov. 13, 1877	12	799
Polishing metal ware and like articles, Preparations for	Quérard & Co	4,365	Feb. 13, 1877	11	251
Polishing preparations	E. Morgan's Sons Co	5,246	Oct. 16, 1877	12	628
Porcelain and other pottery wares	T. C. Smith & Sons	4,700	June 5, 1877	11	973
Potash, Caustic	B. T. Babbitt	5,229	Oct. 16, 1877	12	627
Pottery-ware, including stone-china and earthenware	H. Laughlin	5,152	Sept. 18, 1877	12	478
Printed publications	H. Lockwood	4,942	July 24, 1877	12	139
Pumps	J. Ryer, A. H. Van Hoeson, & S. Hardick.	4,445	Mar. 13, 1877	11	421
Putty	Chicago White Lead and Oil Company	4,409	Feb. 27, 1877	11	332
Putty	Chicago White Lead and Oil Company	4,410	Feb. 27, 1877	11	332
R.					
Railway-spikes, fish-plates, bolts, and nuts	St. Louis Rail Fastening Company	4,596	May 1, 1877	11	742
Rat, mouse, and roach exterminator	W. B. Horner	5,346	Nov. 20, 1877	12	844
Rats, roaches, ants, &c., Preparation for destroying	J. S. Burdsal	4,840	July 17, 1877	12	95
Razors	N. Joseph	5,124	Sept. 4, 1877	12	397
Relishes, embracing pickled fruits and vegetables, catsups, and salad dressings.	Reckhow Preserving Company	4,426	Mar. 6, 1877	11	377
Remedial agent	J. Blankman	4,600	May 1, 1877	11	743
Ribbon, Black	W. H. Lewis	5,410	Dec. 11, 1877	12	982
Ribbons	A. Soleliac & Sons	4,583	Apr. 24, 1877	11	691
Ribbons and binding or braid	Brainerd, Armstrong & Co	5,036	Aug. 14, 1877	12	270
Ribbons, Silk	H. Funke	4,966	July 31, 1877	12	190
Ribbons, Silk	Leisler & Sommerhoff	4,853	July 17, 1877	12	95
Ribbons, Silk	J. Loth & Co	5,041	Aug. 14, 1877	12	270
Rivets and rivet-burs	Brown & Brothers	4,378	Feb. 20, 1877	11	291
Roofing cement and felt	Warren, Lober & Co	5,387	Nov. 27, 1877	12	891
Rubber goods	O. A. Scott	5,426	Dec. 11, 1877	12	982
Rug-patterns	E. S. Frost & Co	4,311	Jan. 30, 1877	11	154
S.					
Sachet-powder	T. Metcalf & Co	4,505	Mar. 27, 1877	11	505
Saleratus	B. T. Babbitt	5,231	Oct. 16, 1877	12	627
Salt	S. Abbey & Son	4,758	June 26, 1877	11	1114
Salt	Balfour, Guthrie & Co	5,314	Nov. 13, 1877	12	798
Salt	Excelsior Dairy Salt Company	4,664	May 22, 1877	11	880
Salt	J. B. Speed & Co	4,682	May 22, 1877	11	881
Salts, Liquid crab-orchard	S. N. Jones	5,422	Dec. 11, 1877	12	982
Salve	G. Dales	4,832	July 3, 1877	12	9
Salve	A. Laube	4,455	Dec. 25, 1877	12	1078
Salve, Eye	Pettit & Barker	4,364	Feb. 13, 1877	11	251
Salve or ointment for the piles	J. F. Oates & Co	4,679	May 22, 1877	11	881
Sauce, Table	C. H. Smith	4,563	Apr. 17, 1877	11	643
Sausages	A. Feigelstock	5,151	Sept. 18, 1877	12	478
Scales	J. Chatillon & Sons	5,023	Aug. 14, 1877	12	270
Seed and grain drills	J. Ingels	4,650	May 15, 1877	11	834
Seeding machine, Grain	Farmers' Friend Manufacturing Company.	4,646	May 15, 1877	11	834
Seeding machine, Grain	Farmers' Friend Manufacturing Company.	4,764	June 26, 1877	11	1114
Seeding machine, Grain	Farmers' Friend Manufacturing Company.	4,907	July 17, 1877	12	97

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Sewing-machine	R. M. Wanzer & Co	5,397	Dec. 4, 1877	12	943
Sewing-machine	Wilson Sewing Machine Company	4,255	Jan. 2, 1877	11	6
Sewing-machine needles	W. Wilcox	5,105	Aug. 28, 1877	12	354
Sewing-machines, needles, and attachments	Johnson, Clark & Co	5,356	Nov. 20, 1877	12	844
Sewing-machines, Wax-thread	Consolidated Wax Thread Sewing Machine Company.	4,371	Feb. 13, 1877	11	251
Sheet-metal ware, Enameled	Lalance & Grosjean Manufacturing Company.	4,670	May 22, 1877	11	880
Sheet-metal ware, Enameled	Lalance & Grosjean Manufacturing Company.	4,671	May 22, 1877	11	880
Sheet-metal ware, Enameled	Metal Manufacturing Company	4,784	June 26, 1877	11	1114
Sheetings	E. R. Mudge, Sawyer & Co	4,559	Apr. 17, 1877	11	643
Sheetings, Cotton	Janesville Cotton Manufacturing Company.	4,666	May 22, 1877	11	880
Sheetings, Cotton	Lawrence Manufacturing Company	4,421	Mar. 6, 1877	11	376
Shirt fronts or bosoms	R. O. Davies	4,796	July 3, 1877	12	8
Shirts	Miller & Brother	4,855	July 17, 1877	12	95
Shirts	G. Richardson	5,292	Oct. 30, 1877	12	717
Shirts, shirt-fronts, drawers, and overalls	S. Sternberger	5,354	Nov. 20, 1877	12	844
Shirtings	G. B. Durfee	4,869	July 17, 1877	12	96
Shoe-dressing	G. D. Hill & Co	5,188	Oct. 2, 1877	12	5
Shoe-tip	J. Mundell & Co	4,457	Dec. 25, 1877	12	1078
Shoes	Maynard & Jones	5,029	Aug. 14, 1877	12	270
Shoes, Ladies' and children's	G. D. Hill & Co	4,665	May 22, 1877	11	880
Shovels, spades, and scoops	O. Ames & Sons Corporation	4,722	June 12, 1877	11	1012
Shovels, spades, and scoops	O. Ames & Sons Corporation	4,723	June 12, 1877	11	1012
Shovels, spades, and scoops	O. Ames & Sons Corporation	4,724	June 12, 1877	11	1012
Shovels, spades, and scoops	O. Ames & Sons Corporation	4,725	June 12, 1877	11	1012
Shovels, spades, and scoops	O. Ames & Sons Corporation	4,726	June 12, 1877	11	1012
Sickle-grinder	Powell & Stevens	4,581	Apr. 24, 1877	11	691
Signs	A. S. Mann	4,422	Mar. 6, 1877	11	377
Silk-twist	J. Holland	4,501	Mar. 27, 1877	11	505
Silk-twist	J. Holland	4,502	Mar. 27, 1877	11	505
Silks, Black	Leisler & Sommerhoff	4,941	July 24, 1877	12	139
Silks, Black	E. Warburg & Co	5,243	Oct. 16, 1877	12	628
Silver and plated ware	Adams & Shaw Company	4,433	Mar. 6, 1877	11	377
Silver and plated ware	Tiffany & Co	4,639	May 15, 1877	11	834
Skates	E. H. Barney	4,330	Feb. 6, 1877	11	198
Skates	E. H. Barney	4,331	Feb. 6, 1877	11	198
Skin-diseases, Specific for	I. Dunlop and E. M. Doubleday	4,643	May 15, 1877	11	834
Soap	R. W. Bell	4,454	Mar. 20, 1877	11	460
Soap	R. W. Bell	4,514	Apr. 3, 1877	11	555
Soap	R. W. Bell & Co	4,453	Mar. 20, 1877	11	460
Soap	Bowen & Cunningham	4,694	June 5, 1877	11	973
Soap	H. E. Burger	4,546	Apr. 17, 1877	11	642
Soap	Cornwall & Brother	4,835	July 10, 1877	12	54
Soap	Cornwall & Brother	4,868	July 17, 1877	12	96
Soap	Cortell & Russ	4,380	Feb. 20, 1877	11	291
Soap	A. T. Crawley	4,601	May 1, 1877	11	743
Soap	T. Curran	4,818	July 3, 1877	12	8
Soap	C. Davis & Co	5,210	Oct. 16, 1877	12	627
Soap	Day & Frick	5,293	Nov. 6, 1877	12	757
Soap	Day & Frick	5,403	Dec. 11, 1877	12	982
Soap	Day & Frick	5,444	Dec. 18, 1877	12	1028
Soap	W. Dreydoppel	4,436	Mar. 13, 1877	11	421
Soap	C. Earle	5,447	Dec. 18, 1877	12	1028
Soap	R. Eastman	4,460	Mar. 20, 1877	11	461
Soap	T. Gill	4,312	Jan. 30, 1877	11	154
Soap	Gowans & Co	4,461	Mar. 20, 1877	11	461
Soap	Gowans & Co	4,554	Apr. 17, 1877	11	643
Soap	Holmes & Tuller	4,788	June 26, 1877	11	1115
Soap	J. M. Jones	4,791	June 26, 1877	11	1115
Soap	J. H. Keller	4,526	Apr. 10, 1877	11	601
Soap	C. F. Kopitzsch & Son	4,692	May 29, 1877	11	927
Soap	Lautz Brothers & Co	4,391	Feb. 20, 1877	11	291
Soap	Lautz Brothers & Co	5,054	Aug. 21, 1877	12	314
Soap	Lautz Brothers & Co	5,098	Aug. 28, 1877	12	354
Soap	Lincoln & Holbrook	5,125	Sept. 4, 1877	12	397
Soap	McCullough Soap Company	4,971	July 31, 1877	12	190
Soap	J. McKeone	4,972	July 31, 1877	12	190
Soap	Monteath & Co	4,777	June 26, 1877	11	1114
Soap	Proctor & Gamble	4,919	July 17, 1877	12	97
Soap	Proctor & Gamble	5,156	Sept. 18, 1877	12	478
Soap	Proctor & Gamble	5,157	Sept. 18, 1877	12	479
Soap	Robinson Brothers & Co	4,323	Jan. 30, 1877	11	155
Soap	Robinson Brothers & Co	4,388	Feb. 20, 1877	11	291
Soap	Robinson Brothers & Co	4,611	May 1, 1877	11	743
Soap	Robinson Brothers & Co	4,892	July 17, 1877	12	96
Soap	Schultz & Co	4,582	Apr. 24, 1877	11	691
Soap	O. Tousey & Co	4,523	Apr. 3, 1877	11	555
Soap	J. E. Weaver	4,396	Feb. 20, 1877	11	291
Soap and other toilet articles, Toilet	Steele & Price	4,307	Jan. 23, 1877	11	113
Soap, Castile	D. De Rouffia & Co	5,240	Oct. 16, 1877	12	628
Soap, Concentrated soft	F. M. Pleius	5,136	Sept. 11, 1877	12	432
Soap, Household and laundry	H. E. Burger	5,260	Oct. 23, 1877	12	669
Soap, Laundry	J. Biochele	4,686	May 29, 1877	11	927
Soap, Laundry	G. A. Wrisley	5,227	Oct. 16, 1877	12	627
Soap, Laundry hard	B. T. Babbitt	5,230	Oct. 16, 1877	12	627
Soap-making preparation	L. Graff	4,757	June 19, 1877	11	1063
Soap, Medicated shaving	T. Ricksecker	5,425	Dec. 11, 1877	12	982
Soap, Polishing	J. T. Schwachhofer	4,979	July 31, 1877	12	190
Soap-powder, Borax	B. T. Babbitt	5,232	Oct. 16, 1877	12	627
Soap, Shaving	Howard & Brewster	4,649	May 15, 1877	11	834
Soap, Toilet	Allan Hay Company	5,310	Nov. 13, 1877	12	798

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Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Soap, Toilet	Allan Hay Company	5,311	Nov. 13, 1877	12	798
Soap, Toilet	B. T. Babbitt	4,293	Jan. 23, 1877	11	113
Soap, Toilet	J. W. Thomas	5,443	Dec. 18, 1877	12	1028
Soaps	J. A. Meyer	4,456	Dec. 25, 1877	12	1078
Soda-water and aerated beverages	H. L. Bowker	5,202	Oct. 9, 1877	12	36
Spectacles and eyeglasses	G. Johnston	4,419	Mar. 6, 1877	11	376
Spices	Sloan, Johnson & Co	4,860	July 17, 1877	12	95
Spool-cotton	G. F. Foster	4,550	Apr. 17, 1877	11	642
Spool-cotton	G. F. Foster	4,551	Apr. 17, 1877	11	642
Spool-cotton	G. F. Foster	4,552	Apr. 17, 1877	11	642
Spool-cotton	J. O. King	5,167	Sept. 25, 1877	12	519
Spool-cotton	S. B. Nichols	4,678	May 22, 1877	11	880
Spool-cotton	A. T. Stewart & Co	4,509	Mar. 27, 1877	11	505
Starch	Chicago Starch Works	5,145	Sept. 11, 1877	12	432
Starch	Glen Cove Starch Manufacturing Company.	4,621	May 8, 1877	11	791
Starch	Glen Cove Starch Manufacturing Company.	4,622	May 8, 1877	11	791
Starch	T. Kingsford	5,318	Nov. 13, 1877	12	799
Starch	T. Kingsford	5,357	Nov. 20, 1877	12	844
Starch	C. B. Marsh & Co	5,438	Dec. 18, 1877	12	1027
Starch	Muzzy & Sage Brothers	4,277	Jan. 16, 1877	11	71
Starch	W. E. Plummer & Son	5,174	Sept. 25, 1877	12	520
Starch	Wesp, Lautz Brothers & Co	5,149	Sept. 11, 1877	12	432
Starch and corn-starch	The St. Charles Starch Company	4,476	Mar. 20, 1877	11	461
Starch and starch products	T. Kingsford & Son	4,852	July 17, 1877	11	95
Starch for food	Krygers, Rasmussen & Co	5,253	Oct. 23, 1877	12	669
Starch, glucose, grape-sugar, and grape-sirup	American Grape Sugar Company	5,428	Dec. 18, 1877	12	1027
Stationery and fancy goods connected therewith	Tiffany & Co	5,064	Aug. 21, 1877	12	314
Stencil-plates	A. Neuwall	4,631	May 15, 1877	11	834
Stocking-supporters	Warner Brothers	4,704	June 5, 1877	11	973
Stone and artificial-stone pavements, Artificial	Firm of W. Krause	4,251	Jan. 2, 1877	11	6
Stone and artificial-stone pavements, Artificial	Firm of W. Krause	4,794	June 26, 1877	11	1115
Stove-blacking, Liquid	E. Baxter	4,353	Feb. 13, 1877	11	251
Stove-castings	Detroit Stove Works	4,964	July 31, 1877	12	190
Stove-polish	H. D. Atwood	5,072	Aug. 21, 1877	12	314
Stove-polish	H. D. Atwood	5,132	Sept. 11, 1877	12	432
Stove-polish	J. Dixon Crucible Company	5,197	Oct. 2, 1877	12	6
Stove-polish	J. Dixon Crucible Company	5,198	Oct. 2, 1877	12	6
Stove-polish	C. W. Montgomery	5,160	Sept. 18, 1877	12	479
Stove-polish	S. S. Myers	4,530	Apr. 10, 1877	11	601
Stove-polish	N. H. Parker & Co	4,407	Feb. 27, 1877	11	332
Stoves	Comstock, Castle & Co	4,399	Feb. 27, 1877	11	332
Stoves	C. Noble & Co	4,578	Apr. 24, 1877	11	691
Stoves and ranges, Cooking	Thomas, Roberts, Stevenson & Co	4,534	Apr. 10, 1877	11	601
Sugar, molasses, and sirup	De Castro and Donner Sugar Refining Company.	4,604	May 1, 1877	11	743
Sugar, molasses, and sirup	De Castro and Donner Sugar Refining Company.	4,605	May 1, 1877	11	743
Sugar, Pulverized	C. J. Hawley	5,416	Dec. 11, 1877	12	982
Sugar, Refined	F. O. Matthiessen & Wiechers Sugar Refining Company.	5,004	Aug. 7, 1877	12	230
Sugars	Havemeyers & Elder	5,317	Nov. 13, 1877	12	799
Sugars	Havemeyers & Elder	5,325	Nov. 13, 1877	12	799
Sumac	W. T. King	4,250	Jan. 2, 1877	11	6
Syringe, Rubber	Macdonald & Sutton	4,652	May 15, 1877	11	834
T.					
Tables	Lambie & Sargent	4,617	May 8, 1877	11	791
Tanks, cans, and other receptacles for oils, &c	Pargetizel Can Company	4,284	Jan. 16, 1877	11	71
Tea	Haas Brothers	4,900	July 17, 1877	12	97
Tea	Haas Brothers	4,902	July 17, 1877	12	97
Tea	M. Sato	4,921	July 17, 1877	12	97
Teas	M. Gillet & Co	4,270	Jan. 16, 1877	11	71
Teas	A. Mau & Co	4,527	Apr. 10, 1877	11	601
Teas	Walker Brothers	4,434	Mar. 6, 1877	11	377
Teas, Japan	E. B. Millar & Co	4,348	Feb. 6, 1877	11	199
Textile fabrics, Compound	L. W. Whipple	4,375	Feb. 13, 1877	11	252
Thrashing-machines and separators	Eagle Machine Works	5,355	Nov. 20, 1877	12	844
Thread	Hadley Company	4,626	May 15, 1877	11	834
Thread	Hadley Company	4,627	May 15, 1877	11	834
Thread, Cotton	J. Einstein	4,310	Jan. 30, 1877	11	154
Thread, Flax	T. Barbour	4,657	May 22, 1877	11	880
Thread, Linen	L. Lichtenstein	5,134	Sept. 11, 1877	12	432
Thread, Linen machine	Ross, Turner & Co	4,825	July 3, 1877	12	8
Threads and twines, Flax	T. Barbour	4,961	July 31, 1877	12	190
Tobacco	C. E. Messinger	4,984	July 31, 1877	12	191
Tobacco	Seidenberg & Co	4,325	Jan. 30, 1877	11	155
Tobacco and cigars	A. E. Brooks	4,545	Apr. 17, 1877	11	642
Tobacco and cigars	Lozano, Pendas & Co	4,404	Feb. 27, 1877	11	332
Tobacco and cigars	Lozano, Pendas & Co	4,405	Feb. 27, 1877	11	332
Tobacco and cigarettes, Smoking	F. W. Felgner & Son	4,786	June 26, 1877	11	1114
Tobacco and cigarettes, Smoking and chewing	D. Hirsch & Co	4,851	July 17, 1877	12	95
Tobacco and snuff, Manufactured	Dohan, Carroll & Co	4,612	May 1, 1877	11	743
Tobacco, Chewing	B. F. Gravely	4,768	June 26, 1877	11	1114
Tobacco, Chewing	B. F. Gravely	4,769	June 26, 1877	11	1114
Tobacco, Chewing	C. Peper	4,680	May 22, 1877	11	881
Tobacco, Chewing	Quigg & Allen	4,975	July 31, 1877	12	190
Tobacco, Chewing and smoking	Buchanan & Lyall	4,933	July 24, 1877	12	139
Tobacco, Chewing and smoking	Buchanan & Lyall	4,934	July 24, 1877	12	139
Tobacco, Chewing and smoking	Buchanan & Lyall	4,935	July 24, 1877	12	139
Tobacco, cigars, and cigarettes	M. M. Smith	4,460	Mar. 6, 1877	11	377
Tobacco, cigars, and cigarettes, Chewing and smoking	D. Hirsch & Co	4,799	July 3, 1877	12	8

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Tobacco, cigars, and cigarettes, Chewing and smoking	D. Hirsch & Co	4,800	July 3, 1877	12	8
Tobacco, cigars, and cigarettes, Chewing and smoking	D. Hirsch & Co	4,801	July 3, 1877	12	8
Tobacco, cigars, and cigarettes, Chewing and smoking	D. Hirsch & Co	4,803	July 3, 1877	12	8
Tobacco, cigars, and cigarettes, Chewing and smoking	D. Hirsch & Co	4,804	July 3, 1877	12	8
Tobacco, cigars, and cigarettes, Smoking and chewing	D. Hirsch & Co	4,850	July 17, 1877	12	95
Tobacco, cigars, and cigarettes, Smoking and chewing	B. J. Sommes & Co	4,980	July 31, 1877	12	190
Tobacco, Cut	C. H. Lilienthal	4,674	May 22, 1877	11	880
Tobacco, Fine-cut and plug chewing	Moore, Jenkins & Co	5,215	Oct. 16, 1877	12	627
Tobacco, Fine-cut chewing	Cotterill, Fenner & Co	5,166	Sept. 25, 1877	12	519
Tobacco, Fine-cut chewing	Spence Brothers & Co	4,709	June 5, 1877	11	973
Tobacco, Fine-cut chewing	Spence Brothers & Co	4,710	June 5, 1877	11	973
Tobacco, Fine-cut smoking	G. Jaquet & Co	4,998	Aug. 7, 1877	12	230
Tobacco, Leaf	J. J. Almirall	4,641	May 15, 1877	11	834
Tobacco, Leaf	Becker Brothers	5,401	Dec. 4, 1877	12	943
Tobacco, Leaf	W. R. Fortier	4,298	Jan. 23, 1877	11	113
Tobacco, Leaf	F. Garcia	4,967	July 31, 1877	12	190
Tobacco, Leaf	Vega & Bernheim	5,147	Sept. 11, 1877	12	432
Tobacco, Manufactured	G. W. Gail & Ax	4,647	May 15, 1877	11	834
Tobacco, Manufactured	M. F. Keeshan	4,440	Mar. 13, 1877	11	421
Tobacco-pipe stem	W. Demuth	4,516	Apr. 3, 1877	11	555
Tobacco, Plain plug chewing	B. A. Van Schaick	5,196	Oct. 2, 1877	12	5
Tobacco, Plug	Allen & Co	4,656	May 22, 1877	11	880
Tobacco, Plug	Buchanan & Lyall	4,249	Jan. 2, 1877	11	6
Tobacco, Plug	Buchanan & Lyall	4,839	July 1, 1877	12	95
Tobacco, Plug	J. G. Dill	4,296	Jan. 23, 1877	11	113
Tobacco, Plug	Foree & Co	4,620	May 8, 1877	11	791
Tobacco, Plug	J. W. Holland	5,248	Oct. 23, 1877	12	669
Tobacco, Plug	H. W. Hunt	5,295	Nov. 6, 1877	12	757
Tobacco, Plug	H. W. Hunt	5,345	Nov. 20, 1877	12	844
Tobacco, Plug	C. A. Jackson & Co	4,403	Feb. 27, 1877	11	332
Tobacco, Plug	W. and A. Leaman	5,190	Oct. 2, 1877	12	5
Tobacco, Plug	Merchants' Tobacco Company	4,827	July 3, 1877	12	9
Tobacco, Plug	Merchants' Tobacco Company	4,828	July 3, 1877	12	9
Tobacco, Plug	Merchants' Tobacco Company	4,829	July 3, 1877	12	9
Tobacco, Plug	Merchants' Tobacco Company	5,350	Nov. 20, 1877	12	844
Tobacco, Plug	Merchants' Tobacco Company	5,351	Nov. 20, 1877	12	844
Tobacco, Plug	Merchants' Tobacco Company	5,368	Nov. 27, 1877	12	891
Tobacco, Plug	H. K. & F. B. Thurber & Co	5,312	Nov. 13, 1877	12	798
Tobacco, Plug	S. W. Venable & Co	4,510	Mar. 27, 1877	11	505
Tobacco, Plug	L. & E. Wertheimer	5,398	Dec. 4, 1877	12	943
Tobacco, Plug chewing	Dausman & Drummond Tobacco Company.	4,584	Apr. 24, 1877	11	691
Tobacco, Plug chewing	Dausman & Drummond Tobacco Company.	4,705	June 5, 1877	11	973
Tobacco, Plug chewing	Dausman & Drummond Tobacco Company.	4,713	June 12, 1877	11	1012
Tobacco, Plug chewing	Dausman & Drummond Tobacco Company.	5,339	Nov. 20, 1877	12	844
Tobacco, Plug chewing	Harris, Beebe & Co	5,378	Nov. 27, 1877	12	891
Tobacco, Plug chewing	Liggett & Myers	5,332	Nov. 20, 1877	12	844
Tobacco, Plug chewing	Liggett & Myers	5,381	Nov. 27, 1877	12	891
Tobacco, Plug chewing	P. Lorillard & Co	5,279	Oct. 30, 1877	12	717
Tobacco, Plug chewing	J. B. Pace	5,411	Dec. 11, 1877	12	982
Tobacco, Plug chewing	Pioneer Tobacco Company	5,101	Aug. 28, 1877	12	354
Tobacco, Plug chewing	Pioneer Tobacco Company	5,102	Aug. 28, 1877	12	354
Tobacco, Plug chewing	Pioneer Tobacco Company	5,103	Aug. 28, 1877	12	354
Tobacco, Plug chewing	Pioneer Tobacco Company	5,104	Aug. 28, 1877	12	354
Tobacco, Plug chewing	Pioneer Tobacco Company	5,129	Sept. 4, 1877	12	397
Tobacco, Smoking	Beck & Feldkamp	5,086	Aug. 28, 1877	12	354
Tobacco, Smoking	C. H. Conrad	4,477	Mar. 27, 1877	11	504
Tobacco, Smoking	C. H. Conrad	4,478	Mar. 27, 1877	11	504
Tobacco, Smoking	G. W. Gail & Ax	4,846	July 17, 1877	12	95
Tobacco, Smoking	Goodwin & Co	4,938	July 24, 1877	12	139
Tobacco, Smoking	Goodwin & Co	4,939	July 24, 1877	12	139
Tobacco, Smoking	L. Green	5,431	Dec. 18, 1877	12	1027
Tobacco, Smoking	W. S. Kimball & Co	5,278	Oct. 30, 1877	12	717
Tobacco, Smoking	W. S. Kimball & Co	5,435	Dec. 18, 1877	12	1027
Tobacco, Smoking	P. Lorillard & Co	5,216	Oct. 16, 1877	12	627
Tobacco, Smoking	Z. I. Lyon & Co	5,298	Nov. 6, 1877	12	757
Tobacco, Smoking	C. R. Messinger	4,471	Mar. 20, 1877	11	461
Tobacco, Smoking	C. R. Messinger	4,522	Apr. 3, 1877	11	555
Tobacco, Smoking	C. R. Messinger	5,299	Nov. 6, 1877	12	757
Tobacco, Smoking	C. R. Messinger	5,300	Nov. 6, 1877	12	757
Tobacco, Smoking	A. Meyer & Co	4,320	Jan. 30, 1877	11	155
Tobacco, Smoking	J. Richardson	4,490	Mar. 27, 1877	11	504
Tobacco, Smoking	M. Riquelme	4,958	July 24, 1877	12	140
Tobacco, Smoking	Spaulding & Merrick	4,634	May 15, 1877	11	834
Tobacco, Smoking	Spaulding & Merrick	5,370	Nov. 27, 1877	12	891
Tobacco, Smoking	H. Wilkens & Co	4,292	Jan. 23, 1877	11	113
Tobacco, Smoking and chewing	Beck & Feldkamp	5,085	Aug. 28, 1877	12	354
Tobacco, Smoking and chewing	T. Moore & Co	5,225	Oct. 16, 1877	12	627
Tobacco, Smoking and chewing	A. Pearl	4,363	Feb. 13, 1877	11	251
Tobacco, Smoking and chewing	Watson & McGill	5,067	Aug. 21, 1877	12	314
Tobacco, Smoking and chewing	Watson & McGill	5,068	Aug. 21, 1877	12	314
Tobacco, Smoking and chewing	Watson & McGill	5,069	Aug. 21, 1877	12	314
Tobacco, Smoking and chewing	Watson & McGill	5,070	Aug. 21, 1877	12	314
Tobacco, Smoking and chewing	Winslow & Myrick	5,273	Oct. 23, 1877	12	670
Toilet-powder	V. Franck	4,498	Mar. 27, 1877	11	504
Toilet-wash	F. Wright & Brothers	4,982	July 31, 1877	12	191
Toilet-water	C. Lediard	4,732	June 12, 1877	11	10 2
Tongues, tripe, and pigs' feet	H. C. Derby & Co	4,497	Mar. 27, 1877	11	504
Tonic or cordial	C. Berteaux & Radou	5,162	Sept. 25, 1877	12	519
Tooth-powder	N. R. Scott & Son	4,367	Feb. 13, 1877	11	251
Towelings	Stark Mills	4,492	Mar. 27, 1877	11	504

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette. Vol.	Page.
Trimmings, Drapery and upholstery	C. A. Schmidt	5,008	Aug. 7, 1877	12	230
Trimmings, such as braids and bindings	Lesher, Whitman & Co	4,465	Mar. 20, 1877	11	461
Twine, warp, yarn, &c	E. W. Keeler	4,591	May 1, 1877	11	742
V.					
Varnishes, Japans, and fresco-size	D. Rosenberg & Sons	5,082	Aug. 21, 1877	12	315
Vehicles and vehicle-springs	W. W. Grier	5,080	Aug. 21, 1877	12	315
Violins, tenors, and violoncellos	L. Lowendall	4,613	May 8, 1877	11	790
W.					
Wagon-axle	D. A. Brown & Co	4,354	Feb. 13, 1877	11	251
Wagons, Road	Cherry, O'Connor & Co	4,881	July 17, 1877	12	96
Warps, Chemical composition for use with sizing for	T. Burrell and R. Smith	4,841	July 17, 1877	12	95
Warps or twine, Cotton	D. Warner	4,414	Mar. 6, 1877	11	376
Washing clothes, Mixture for	Marsh & Co	5,154	Sept. 18, 1877	12	478
Washing compounds	J. Pyle	5,322	Nov. 13, 1877	12	799
Washing-crystal	F. Hofmann	4,628	May 15, 1877	11	834
Washing-crystal	F. Hofmann	4,629	May 15, 1877	11	834
Washing-powder	E. M. Johnson	4,483	Mar. 27, 1877	11	504
Watches	Elgin National Watch Company	4,994	Aug. 7, 1877	12	230
Watches	Elgin National Watch Company	4,995	Aug. 7, 1877	12	230
Watches	J. Gordon	4,439	Mar. 13, 1877	11	421
Watches	L. & A. Mathey	4,823	July 3, 1877	12	8
Watches	J. E. Robert	4,814	July 3, 1877	12	8
Watches	A. Schwob	4,491	Mar. 27, 1877	11	504
Watches, chronometers, and timers	W. B. Fowle	5,016	Aug. 7, 1877	12	230
Water-closet	A. G. Myers	4,630	Mar. 15, 1877	11	834
Water-proof cellars	T. New	5,290	Oct. 30, 1877	12	717
Whiskies	Woolner Brothers	4,567	Apr. 17, 1877	11	643
Whiskies	Woolner Brothers	4,568	Apr. 17, 1877	11	643
Whisky	H. C. Clay & Co	4,455	Mar. 20, 1877	11	460
Whisky	M. Durner & Co	4,689	May 29, 1877	11	927
Whisky	Hoffheimer Brothers	5,306	Nov. 13, 1877	12	798
Whisky	A. P. Hotaling	5,434	Dec. 18, 1877	12	1027
Whisky	W. W. Johnson	4,691	May 29, 1877	11	927
Whisky	B. Lieber, Sons & Co	5,333	Nov. 20, 1877	12	844
Whisky	Lilienthal & Co	4,733	June 12, 1877	11	1012
Whisky	Lilienthal & Co	4,734	June 12, 1877	11	1012
Whisky	Miami Distilling Company	5,117	Sept. 4, 1877	12	396
Whisky	More, Reynolds & Co	5,334	Nov. 20, 1877	12	844
Whisky	J. E. Pepper	5,324	Nov. 13, 1877	12	799
Whisky	L. and A. Scharff	5,302	Nov. 6, 1877	12	757
Whisky	Schmidlapp & Co	4,324	Jan. 30, 1877	11	155
Whisky	Steinwender & Sellner	4,508	Mar. 27, 1877	11	505
Whisky	J. C. Yost & Co	4,377	Feb. 13, 1877	11	252
Whisky	J. C. Yost & Co	4,983	July 31, 1877	12	191
Whooping-cough, Preparation for cure of	Novelty Chemical Company	5,335	Nov. 20, 1877	12	844
Wine	L. Roederer	4,698	June 5, 1877	11	973
Wine	L. Roederer	4,699	June 5, 1877	11	973
Wine	L. Roederer	4,779	June 26, 1877	11	1114
Wine	L. Roederer	4,780	June 26, 1877	11	1114
Wine	L. Roederer	5,058	Aug. 21, 1877	12	314
Wine	L. Roederer	5,059	Aug. 21, 1877	12	314
Wine	L. Roederer	5,060	Aug. 21, 1877	12	314
Wine	L. Roederer	5,061	Aug. 21, 1877	12	314
Wine	L. Roederer	5,254	Oct. 23, 1877	12	669
Wine	L. Roederer	5,383	Nov. 27, 1877	12	891
Wine	L Roederer	5,384	Nov. 27, 1877	12	891
Wine	E. Schultze	4,350	Feb. 6, 1877	11	199
Wine, Claret	Eschenauer & Co	5,073	Aug. 21, 1877	12	314
Wine, Claret	Eschenauer & Co	5,074	Aug. 21, 1877	12	314
Wine, Claret	Eschenauer & Co	5,075	Aug. 21, 1877	12	314
Wine, Claret	Eschenauer & Co	5,076	Aug. 21, 1877	12	314
Wine, Claret	Eschenauer & Co	5,077	Aug. 21, 1877	12	314
Wines	L. Roederer	5,062	Aug. 21, 1877	12	314
Wines	R. W. Tailer	4,782	June 26, 1877	11	1114
Wines	A. Werner	5,011	Aug. 7, 1877	12	230
Wines and brandies	A. De Luce & Fils	4,416	Mar. 6, 1877	11	376
Wines and spirits	Luyties Brothers	4,575	Apr. 24, 1877	11	691
Wines and spirituous liquors	C. F. Eblen	4,936	July 24, 1877	12	139
Wines, Hungarian	L. Reich	5,018	Aug. 7, 1877	12	230
Wire in the coil, Manufacture of	A. S. Halbidie	5,316	Nov. 13, 1877	12	799
Wood and japanned surfaces, Cleaning and polishing fluid for.	G. M. Shepard	5,127	Sept. 4, 1877	12	397
Wood, glass, china, leather, &c., Cement for uniting	Edgerton Brothers	5,343	Nov. 20, 1877	12	844
Wool, Zephyr	Bauer, Tobriner & Co	4,658	May 22, 1877	11	880
Woolen and worsted fabrics for gentlemen's clothing	Washington Mills	5,388	Nov. 27, 1877	12	892
Woolen fabrics	T. E. Hopkins	5,123	Sept. 4, 1877	12	397
Woolen goods, such as cassimeres, doeskins, &c	J. E. Jones	5,214	Oct. 16, 1877	12	627
Woolen yarn known as "Cashmere yarn"	Midnight Yarn Company	4,677	May 22, 1877	11	880
Woolen yarn known as "Germantown wool"	Midnight Yarn Company	4,676	May 22, 1877	11	880
Woolen yarns	Barnes, Bancroft & Co	5,389	Dec. 4, 1877	12	942
Worsted, worsted and woolen yarns, and worsted embroideries, Zephyr.	B. Ulmann & Co	5,451	Dec. 18, 1877	12	1028
Woven cotton and woolen fabrics	Simons & Frowein	5,371	Nov. 27, 1877	12	891
Writing-fluid	J. H. Stone & Co	4,369	Feb. 13, 1877	11	251
Y.					
Yeast	Mohawk Yeast Company	5,359	Nov. 20, 1877	12	844
Yeast	Standard Yeast Company	5,441	Dec. 18, 1877	12	1027
Yeast and bread and cake, Compressed	M. Fleishmann	4,297	Jan. 23, 1877	11	113

Alphabetical list of trade-marks—Continued.

Invention or discovery.	Name of patentee.	No.	Date.	Official Gazette.	
				Vol.	Page.
Yeast and yeast-powder	Steele & Price	4,308	Jan. 23, 1877	11	113
Yeast, Compressed	Frank, Buchstein & Co	4,952	July 24, 1877	12	140
Yeast, Compressed	Kramer & Seifert	4,717	June 12, 1877	11	1012
Yeast, Dry hop	F. H. Mason & Co	4,615	May 8, 1877	11	791
Yeast, Dry hop	J. E. Woodruff	5,244	Oct. 16, 1877	12	628
Yeast-powder	B. T. Babbitt	5,233	Oct. 16, 1877	12	627
Yeast-powder	Haas Brothers	4,901	July 17, 1877	12	97
Yeast-powder and yeast	Steele & Price	4,431	Mar. 6, 1877	11	377
Yeast-powders	H. E. Bothin	5,208	Oct. 16, 1877	12	627

ALPHABETICAL LIST OF LABELS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
A.					
"A Card for Business Men, by Council Wood"	C. Wood	1,047	May 1, 1877	11	743
"A. Dougherty Patented New York"	A. Dougherty	1,118	July 17, 1877	12	97
"Alterative Syrup"	F. S. Stevens	1,287	Dec. 4, 1877	12	943
"America"	Heppenheimer & Maurer	1,267	Nov. 27, 1877	12	892
"Amulet"	Heppenheimer & Maurer	1,265	Nov. 27, 1877	12	892
"A New Design, The Most Perfect System for Cutting Ladies' and Children's Waists, &c."	R. S. Bailey	1,192	Oct. 9, 1877	12	36
"A Sanitary Measure to Prevent Disease"	Gross Brothers	1,111	July 10, 1877	12	55
"Asiatic Insect Destroyer"	J. J. Cassidy	1,049	May 8, 1877	11	791
"A. Z. Ringwalt's Celebrated Hair Liquid"	A. Z. Ringwalt	1,261	Nov. 20, 1877	12	844
B.					
"Babcock's Best Wearing Body Varnish"	J. Babcock & Co	954	Jan. 23, 1877	11	113
"Baccarat"	T. Pabst and H. Esch	1,144	Aug. 7, 1877	12	230
"Balsam of Wild Cherry"	J. D. Park	945	Jan. 9, 1877	11	40
"Barbour Russian Remedy"	Russian Remedy Company	1,295	Dec. 11, 1877	12	982
"Barbour's No. 12, 10-Cent Ball, Best Irish Flax"	T. Barbour	1,041	May 1, 1877	11	743
"Bassett's Combination Burgundy Pitch Plaster"	D. H. Bassett	1,190	Sept. 25, 1877	12	520
"Beam's Domestic Medicines"	J. C. Beam	1,042	May 1, 1877	11	743
"Benter's Laundry Indigo Blueing"	H. Benter	1,177	Sept. 11, 1877	12	432
"Best Light Oak"	Heath & Milligan	1,120	July 17, 1877	12	97
"Blatticide, a Destroyer of Cockroaches and Water Bugs"	H. Thayer & Co	1,273	Nov. 27, 1877	12	892
"Bock Y. Ca. Trade-Mark"	R. S. Strobel	1,204	Oct. 16, 1877	12	628
"Bock y Co."	R. S. Strobel	1,213	Oct. 23, 1877	12	670
"Bock y Co. Habana"	R. S. Strobel	1,214	Oct. 23, 1877	12	670
"Boland's Aromatic Bitter Wine of Iron"	J. Boland	1,308	Dec. 18, 1877	12	1028
"Boonekamp of Maag Bitter"	M. Eisner and S. Mandel	1,141	Aug. 7, 1877	12	230
"Boston Yeast Powder"	K. and S. A. Freeman	955	Jan. 23, 1877	11	113
"Brain Food"	J. H. Allen and R. A. Cunningham.	1,027	Apr. 10, 1877	11	601
"Brandenburg Freres, Bordeaux"	A. Oechs	1,200	Oct. 16, 1877	12	628
"Brined"	A. C. Pettingell	961	Jan. 23, 1877	11	114
"Bucklino's Triple Extract Bouquets"	T. B. Bailey	1,263	Nov. 27, 1877	12	892
"Button's Pearl Breakfast Hominy"	C. M. Button	1,122	July 24, 1877	12	140
"Button's Superior White Crushed"	C. M. Button	1,123	July 24, 1877	12	140
"By Appointment"	J. D. Park	942	Jan. 9, 1877	11	40
C.					
"Camphorated Tar Paper"	R. Lautenbach	1,067	May 22, 1877	11	881
"Cank r Cure Bitters"	W. C. Collins	1,050	May 8, 1877	11	791
"Carbolic Mouth Wash"	Meade & Baker	1,320	Dec. 18, 1877	12	1028
"Carter's Raven-Black Ink"	Carter, Dinsmore & Co	1,324	Dec. 25, 1877	12	1078
"Cast Tool Steel Casting"	A. J. Nellis	1,253	Nov. 13, 1877	12	799
"Catawba Grape Champagne"	L. Siegel	1,212	Oct. 23, 1877	12	670
"Certain Cure for Headache"	G. D. Coaoey	1,129	July 31, 1877	12	191
"Ceylon Balsam"	L. H. Colborne & Co	1,109	July 10, 1877	12	55
"Chemical Spirit Gas"	C. E. Flagg	1,060	May 15, 1877	11	835
"Chinese Paper Ware"	R. H. Stilwell	1,305	Dec. 11, 1877	12	983
"Chocolated Tablets of Chlorate Potass"	G. P. Brooks	1,048	May 8, 1877	11	791
"Clark's Harness-Oil Blacking"	Clark, Sell & Co	946	Jan. 16, 1877	11	71
"Clifford's Febrifuge"	J. C. Richardson	1,157	Aug. 21, 1877	12	315
"Clifford's Febrifuge, or Fever and Ague Cure"	J. C. Richardson	1,158	Aug. 21, 1877	12	315
"Clinton Window Screen Wire Cloth"	Clinton Wire Cloth Company	1,004	Mar. 20, 1877	11	461
"Coca Bitters"	C. M. Fletcher	1,163	Aug. 28, 1877	12	354
"C. O. D. One Price Clothing House"	I. Blumenson & Co	1,145	Aug. 7, 1877	12	230
"Collar & Matthews' $1.00 Catarrh Cure"	A. Collar and H. J. Matthews	1,073	May 29, 1877	11	927
"Collins & Co. 'Hartford' Cast Cast Steel Plows"	Collins Company	1,289	Dec. 4, 1877	12	943
"Colton's Toilet Article No. 3, for the Complexion and Skin."	J. W. Colton	1,014	Mar. 27, 1877	11	505
"Commercial Collar Co."	Isaacs & Levy	953	Jan. 16, 1877	11	71
"Complimentary"	J. Schloss	1,011	Mar. 20, 1877	11	461
"Compound Glycerite of Carbolic Acid and Camphor"	R. B. Ferguson	1,105	July 3, 1877	12	9
"Compressed Tablets of Chlorate of Potash"	J. Wyeth & Brother	1,001	Mar. 13, 1877	11	422
"Compressed Tablets of Chlorate of Potash"	J. Wyeth & Brother	1,002	Mar. 13, 1877	11	422
"Compressed Tablets of Chlorate of Potash"	J. Wyeth & Brother	1,003	Mar. 13, 1877	11	422
"Compressed Tablets of Pure Chlorate of Potash, without Gum or Sugar."	J. Wyeth & Brother	1,012	Mar. 20, 1877	11	461
"Cooked Beef Tongue"	Libby, McNeill & Libby	1,210	Oct. 23, 1877	12	670
"Cooked Corn Beef"	Libby, McNeill & Libby	1,211	Oct. 23, 1877	12	670
"Corn and Rock"	J. H. Allen & Co	1,228	Nov. 6, 1877	12	757
"Craig's Kidney Cure"	W. D. Harris	1,312	Dec. 18, 1877	12	1028
"Crayon Indestructible D'Baerri"	H. C. Berry	1,093	June 26, 1877	11	1115
"Crockett's Washing Fluid"	N. B. Crockett	972	Feb. 13, 1877	11	252
D.					
"Damson Bun Pie"	Button Brothers & Co	1,250	Nov. 13, 1877	12	799
"Derby Table Sauce"	M. S. Greenwood and S. K. Compton.	1,070	May 22, 1877	11	881
"De Witt's Carbolated Tar Soap"	T. D. Kavana	979	Feb. 20, 1877	11	291
"Diphtheritic Troches"	C. H. and J. Price	997	Mar. 6, 1877	11	377

Alphabetical list of labels—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Directions"	Marsh & Co	1,017	Mar. 27, 1877	11	505
"Directions"	Marsh & Co	1,019	Mar. 27, 1877	11	505
"Directions for Use"	P. H. Doyle	1,181	Sept. 18, 1877	12	479
"Directions for Using Clifford's Febrifuge"	J. C. Richardeon	1,159	Aug. 21, 1877	12	315
"Dispense with the Buttons and Use the Adjustable Clasp"	H. D. Goldsmith	1,152	Aug. 14, 1877	12	270
"Double Cover"	L. H. Mahn	1,015	Mar. 27, 1877	11	505
"Double Shanks"	G. W. McGill	1,236	Nov. 6, 1877	12	757
"Dr. Adam Bell's Fit Cure"	Specific Medicine Company	1,150	Aug. 7, 1877	12	231
"Dr. A. Q. Simmons' Genuine Vegetable Liver Medicine"	J. G. Webb & Co	1,306	Dec. 11, 1877	12	983
"Dr. A. Q. Simmons' Liver Medicine"	M. A. Thedford & Co	989	Feb. 27, 1877	11	333
"Dr. Blank's Black Medicines, &c."	O. Blank	1,187	Sept. 25, 1877	12	520
"Dr. Church's Vegetable Liver Pills"	W. C. and G. C. Fisher	1,080	June 5, 1877	11	973
"Dr. D. D. Judson's Genuine Healing Balsam"	P. C. Rogers	1,272	Nov. 27, 1877	12	892
"Dr. Dixford's Instant Pain Relief, etc."	G. E. Kingsbury	1,274	Nov. 27, 1877	12	892
"Dr. E. Fenton's Great Catarrh Annihilator"	E. Fenton	1,310	Dec. 18, 1877	12	1028
"Dr. Flynt's Sciatic Remedy"	D. D. Flynt	1,309	Dec. 18, 1877	12	1028
"Dr. Galvin's Celebrated Croup Tincture"	J. W. Garney & Co	1,229	Nov. 6, 1877	12	757
"Dr. Hunter's Instant Pain Exterminator"	G. S. Wyman	939	Jan. 2, 1877	11	6
"Dr. Ira J. Haskins' What Is It? Cures Neuralgia, Catarrh in the Head, &c."	L J. Haskins	1,053	May 8, 1877	11	791
"Dr. John Meagher's All-Healing Salve"	J. Meagher	1,240	Nov. 6, 1877	12	757
"Dr. John Meagher's Wonderful Cure for Scrofula or King's Evil"	J. Meagher	1,239	Nov. 6, 1877	12	757
"Dr. Judge's Oxy-Hydrogenated Air"	J. D. Judge	1,166	Aug. 28, 1877	12	354
"Dr. Koon's Sanguifying Usquebaugh"	J. Koons	1,316	Dec. 18, 1877	12	1028
"Dr. Limerick's Hog Cholera Cure and Preventive"	Marshall, Lamar & Co	1,074	May 29, 1877	11	927
"Dr. N. Weaver's Concentrated Extract Fireweed or Scrofula Cure."	J. L. Belden	1,043	May 1, 1877	11	743
"Dr. Pierce's Compound Extract of Smart Weed"	R. V. Pierce	1,126	July 24, 1877	12	140
"Dr. Pierce's Favorite Prescription"	R. V. Pierce	1,125	July 24, 1877	12	140
"Dr. Sanford's Liver Invigorator or Liver Remedy"	S. T. W. Sanford	1,153	Aug. 14, 1877	12	270
"Dr. Shiloh's System Vitalizer"	S. C. Wells	1,025	Apr. 3, 1877	11	555
"Dr. Sykes Sure Cure for Catarrh"	C. R. Sykes	1,254	Nov. 13, 1877	12	799
"Dr. Wm. Heath's Dropsy Cure"	J. N. C. Groves	994	Mar. 6, 1877	11	377
"Dress Styles"	Renfrew Manufacturing Company.	958	Jan. 23, 1877	11	113
"Dressing for Ladies' and Children's Boots and Shoes"	J. G. Ammon	1,079	June 5, 1877	11	973
"Dry Goods"	Forbes Lithograph Manufacturing Company.	1,132	July 31, 1877	12	191
"Dry Goods"	Forbes Lithograph Manufacturing Company.	1,176	Sept. 4, 1877	12	397
"Dry Goods, Importers, Jobbers, and Retailers"	Forbes Lithograph Manufacturing Company.	1,133	July 31, 1877	12	191
"Ducelle's French Yeast Powder"	J. A. Lane and A. A. Greene	996	Mar. 6, 1877	11	377
E.					
"East Indian Pain Cure"	Donnell & Mansir	983	Feb. 20, 1877	11	291
"Eau-de-Cologne of George Jaques"	G. Jaques	950	Jan. 16, 1877	11	71
"Eau-de-Cologne of George Jaques"	G. Jaques	962	Jan. 30, 1877	11	155
"Economical Soap"	C. F. Kopitzsch & Son	1,028	Apr. 10, 1877	11	601
"Economy Baking Powder, Manufactured by H. and J. Menown"	H. and J. Menown	1,045	May 1, 1877	11	743
"Eddystone"	Eddystone Manufacturing Company.	1,246	Nov. 6, 1877	12	757
"Eggleston's Lubricating Oil"	J. S. Eggleston	1,034	Apr. 17, 1877	11	643
"El Comercio"	Heppenheimer & Maurer	1,258	Nov. 20, 1877	12	844
"Elgin Polish"	H. G. Weatherill	1,323	Dec. 18, 1877	12	1028
"Elixir of Honey"	Specific Medicine Company	1,149	Aug. 7, 1877	12	231
"Elixir Theobroma Comp."	C. B. Woodworth & Son	1,101	June 26, 1877	11	1115
"Elliott's Carbolic Snuff"	Wells & Elliott	1,262	Nov. 20, 1877	12	844
"Empress of India"	Dohan, Carroll & Co	1,044	May 1, 1877	11	743
"English Crown Gin"	J. D. Park	985	Feb. 20, 1877	11	291
"English Crown Gin"	J. D. Park	987	Feb. 20, 1877	11	291
"English Crown Gin"	J. D. Park	988	Feb. 20, 1877	11	291
"Extra Fine, Four Ply, 72 Inch Reel Carpet Warp"	T. Emory	1,104	July 3, 1877	12	9
"Extract Florida Bouquet"	H. E. Wendel	1,138	July 31, 1877	12	191
F.					
"Factory Salt Ashton"	S. Abbey & Son	1,036	Apr. 17, 1877	11	643
"Fairbrother's Venetian Ointment and Emolient Salve"	H. F. Fairbrother	1,066	May 22, 1877	11	881
"Fall River Standard"	G. B. Durfee	1,139	Aug. 7, 1877	12	230
"Flat Iron Polisher"	Rowe & Co	1,203	Oct. 16, 1877	12	628
"Flat Tops"	G. W. McGill	1,301	Dec. 11, 1877	12	983
"Flohr, Hymers & Co., Choice Confections"	Flohr, Hymers & Co	992	Mar. 6, 1877	11	377
"For the Hair"	A. Connelly	1,058	May 15, 1877	11	835
"Four in Hand"	Heppenheimer & Maurer	1,266	Nov. 27, 1877	12	892
"Four in Hand"	Heppenheimer & Maurer	1,268	Nov. 27, 1877	12	892
"Foye's Italian Liniment"	W. B. Foye	1,005	Mar. 20, 1877	11	461
"Franklin Howe's Medical Discovery"	F. Howes	1,300	Dec. 11, 1877	12	983
"French All Wool Drap D'Ete Cachemire"	B. F. Dewees	1,103	July 3, 1877	12	9
"French Imperisbable Oil Photo."	S. Ross	1,055	May 8, 1877	11	791
G.					
"Gaff, Fleischmann & Co.'s Compressed Yeast"	Gaff, Fleischmann & Co	940	Jan. 9, 1877	11	40
"Gaff, Fleischmann & Co.'s Compressed Yeast"	Gaff, Fleischmann & Co	993	Mar. 6, 1877	11	377
"Genuine Burut Umber"	Heath & Milligan	978	Feb. 20, 1877	11	291
"Genuine Pride of Durham Smoking Tobacco"	Z. I. Lyon & Co	1,270	Nov. 27, 1877	12	892
"Ginger Ale from the Matthews Apparatus"	J. Matthews	1,284	Dec. 4, 1877	12	943
"Gray's Celebrated Wine Bitters"	J. R. Gorham, jr	1,251	Nov. 13, 1877	12	799
"Griffith's Medicinal Blackberry Brandy"	Donnell Manufacturing Company	1,188	Sept. 25, 1877	12	520

Alphabetical list of labels—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
H.					
"Half-Ounce Prepared Gutta-Percha Pellets"	S. S. White	1,026	Apr. 3, 1877	11	555
"Hanford's Purified Bourbon"	A. Hanford & Co	1,143	Aug. 7, 1877	12	230
"Hanford's Purified Rye"	A. Hanford & Co	1,142	Aug. 7, 1877	12	230
"Hawthorne Chesterfields"	Tiogue, House & Co	1,077	May 29, 1877	11	927
"Hayes and Holcomb's Condensed Washing Blue"	C. W. Hayes and A. E. Holcomb	1,061	May 15, 1877	11	835
"H. Clausen & Son, Export Lager Beer"	H. Clausen & Son	1,033	Apr. 17, 1877	11	643
"Heath & Milligan Perfect Green"	Heath & Milligan	1,108	July 3, 1877	12	9
"Hegeman & Co.'s Celebrated Elixir of Calisaya"	Hegeman & Co	1,311	Dec. 18, 1877	12	1028
"Henry Bornstein, Inventor and Patentee of the Popular and Celebrated Pin-Hook."	H. Bornstein	1,171	Sept. 4, 1877	12	397
"Herbs 3 for 10"	F. & M. Herbs	1,174	Sept. 4, 1877	12	397
"Hermetical Lunch Box"	Button Brothers & Co	1,102	July 3, 1877	12	9
"H. H. Hamer's Soap"	H. H. Hamer	1,094	June 26, 1877	11	1115
"Highland Spring India Pale Ale"	Rueter & Alley	1,046	May 1, 1877	11	743
"Holman's Ague and Liver Pad"	Holman Liver Pad Company	1,089	June 19, 1877	11	1063
"Holman's Fever, Ague, and Liver Pad"	Holman Liver Pad Company	1,090	June 19, 1877	11	1063
"Hop Syrup"	B. F. Pilley	952	Jan. 16, 1877	11	71
"Horehound Troches"	A. G. Bassett	964	Feb. 6, 1877	11	199
"Horsford's Acid Phosphate"	Rumford Chemical Works	1,037	Apr. 17, 1877	11	643
"Horsford's Acid Phosphate"	Rumford Chemical Works	1,224	Oct. 30, 1877	12	718
"Horsford's Self-Raising Bread Preparation"	Rumford Chemical Works	937	Jan. 2, 1877	11	6
"Hubbard's Prize Gift Cigar"	W. H. Hubbard	1,279	Dec. 4, 1877	12	943
"Huile D'Olives"	Pinckney, Jackson & Co	1,155	Aug. 14, 1877	12	272
I.					
"Imperial Granum"	E. Heaton	1,081	June 5, 1877	11	973
"Imperial Granum"	E. Heaton	1,082	June 5, 1877	11	973
"Improved Extract of Yellow Dock and Sarsaparilla"	J. D. Park	944	Jan. 9, 1877	11	40
"Ingram's Great Radical Rheumatic Remedy"	J. Ingram	1,083	June 5, 1877	11	973
"Instantaneous Disinfectant and Deodorizer"	J. W. Reay	1,031	Apr. 10, 1877	11	601
"International Prize Medal Oil of Peppermint"	H. G. Hotchkiss	1,006	Mar. 20, 1877	11	461
"Iron Condition Powders"	B. W. Dyer	1,173	Sept. 4, 1877	12	397
J.					
"Jamaica Pills"	C. F. Randolph	1,201	Oct. 16, 1877	12	628
"Jamaica Syrup"	C. F. Randolph	1,202	Oct. 16, 1877	12	628
"Jas. R. Millner's Extra Golden Twist"	J. R. Millner	1,075	May 29, 1877	11	927
"J. D. Soles' Invisible Ink"	J. D. Soles	1,116	July 10, 1877	12	55
"John D. Park is the sole Manufacturer of this Delightful and Palatable Gin, &c."	J. D. Park	943	Jan. 9, 1877	11	40
"John Meagher's Celebrated Eye Water"	J. Meagher	1,191	Oct. 2, 1877	12	6
"J. J. Rogers' Celebrated Birch Beer"	J. J. Rogers	1,148	Aug. 7, 1877	12	231
K.					
"Keep the Bottle Well Corked, and Shake Before Using"	Marsh & Co	1,018	Mar. 27, 1877	11	505
"Keith's Cough Compound"	B. Keith & Co	1,314	Dec. 18, 1877	12	1028
"Keith's Dyspepsia Elixir"	B. Keith & Co	1,315	Dec. 18, 1877	12	1028
"Kidney Tea"	B. W. Dyer	1,131	July 31, 1877	12	191
"Kimm's Ague Cure"	G. G. Steketee	1,243	Nov. 6, 1877	12	757
"Kimm's Holland Worm Cakes"	G. G. Steketee	1,242	Nov. 6, 1877	12	757
"Kimm's $1.00 Premium Aromatic Bitters"	G. G. Steketee	1,244	Nov. 6, 1877	12	757
"Kimm's 50c. Premium Aromatic Bitters"	G. G. Steketee	1,245	Nov. 6, 1877	12	757
"King's Good Samaritan Cough Syrup"	G. W. King	1,062	May 15, 1877	11	835
"Kingsford Oswego Pure Starch"	T. Kingsford	1,208	Oct. 23, 1877	12	670
"Kingsford's Oswego Silver-Gloss Starch"	T. Kingsford	1,209	Oct. 23, 1877	12	670
"Kurr's Liquid Hoof Ointment"	H. H. Kurr & Co	1,252	Nov. 13, 1877	12	799
L.					
"Lap-Tablet"	B. Brower	1,160	Aug. 28, 1877	12	354
"Larabee's Celebrated Wheatmeal Biscuit"	E. J. Larabee & Co	1,106	July 3, 1877	12	9
"Lautz Bros. & Co.'s Stearine Soap"	Lautz Brothers & Co	1,167	Aug. 28, 1877	12	354
"Lawson's Curative"	Lawson Chemical Company	1,269	Nov. 27, 1877	12	892
"L. B. Hinman's Asthmatic Respirator and Catarrh Cure"	L. B. Hinman	1,291	Dec. 11, 1877	12	982
"L. Coes' Mechanics' Screw Wrench"	L. Coes and M. O. Whittier	1,161	Aug. 28, 1877	12	354
"Lenzi's Helvetian Salve"	M. Lenzi	1,317	Dec. 18, 1877	12	1028
"Letter and Copying Book"	Young, Rollan & Co	1,175	Sept. 4, 1877	12	397
"Lewis' Hemorrhage Cure"	P. L. D. Thomson	1,087	June 12, 1877	11	1013
"Lewis Sherman, Milwaukee"	L. Sherman	999	Mar. 13, 1877	11	422
"Liberty Brand"	J. B. Pace	1,285	Dec. 4, 1877	12	943
"Liquid Amandine"	J. Q. Hill	995	Mar. 6, 1877	11	377
"Little Joker"	G. W. Gail & Ax	1,189	Sept. 25, 1877	12	540
"London Swan Gin"	J. D. Park	1,194	Oct. 9, 1877	12	36
"London Swan Gin"	J. D. Park	1,195	Oct. 9, 1877	12	36
"Lubricating B. & T. Oil"	R. J. Thompson and E. T. Bedford	1,169	Aug. 28, 1877	12	355
"Lundborg's Triple Extract of Jockey Club"	Young, Ladd & Coffin	1,127	July 24, 1877	12	140
M.					
"Madame Lang's Perfected Nurser"	J. Quinlan	1,136	July 31, 1877	12	191
"Malt Mousseux"	M. Frank	1,085	June 12, 1877	11	1013
"Manufactured by the Philadelphia Cordage Works"	E. H. Fitler & Co	1,119	July 17, 1877	12	97
"Marshall's California Sugar Pine Balsam"	M. W. Marshall	1,326	Dec. 25, 1877	12	1078
"Marvelous Cure for Chills and Fever"	G. D. Coaney	1,130	July 31, 1877	12	191
"Matthis Dysentery Remedy"	C. B. Mathis	1,124	July 24, 1877	12	140
"McGill's Flat Head Paper Fasteners"	G. W. McGill	1,248	Nov. 6, 1877	12	757
"McGill's Paper Fasteners, Assorted Sizes"	G. W. McGill	1,232	Nov. 6, 1877	12	757
"McGill's Patent Binders"	G. W. McGill	1,231	Nov. 6, 1877	12	757
"McGill's Patent Button Head Fasteners"	G. W. McGill	1,233	Nov. 6, 1877	12	757

Alphabetical list of labels—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"McGill's Patent Split Shank Fasteners"	G. W. McGill	1,237	Nov. 6, 1877	12	757
"McGill's Patent T. Binders"	G. W. McGill	1,235	Nov. 6, 1877	12	757
"McGill's Patent T. Fasteners"	G. W. McGill	1,238	Nov. 6, 1877	12	757
"McGill's Round Head Paper Fasteners"	G. W. McGill	1,249	Nov. 6, 1877	12	757
"Meads' Infallible Pile Cure"	H. Moore	1,071	May 22, 1877	11	881
"Medicated Paper"	Gayetty & Co	973	Feb. 13, 1877	11	252
"Merchants Tobacco Co"	Merchants Tobacco Company	1,275	Nov. 27, 1877	12	892
"Merchants Tobacco Co"	Merchants Tobacco Company	1,276	Nov. 27, 1877	12	892
"Miller's Ointment for the Prevention and Positive Cure of Gathered Breasts."	F. L. Miller	1,008	Mar. 20, 1877	11	461
"Miller's Sure Cure for Piles"	F. L. Miller	1,009	Mar. 20, 1877	11	461
"Milwaukee Cement"	Milwaukee Cement Company	957	Jan. 23, 1877	11	113
"Miscellaneous"	G. W. McGill	1,234	Nov. 6, 1877	12	757
"Misfit Carpets"	J. A. Bendell	1,170	Sept. 4, 1877	12	397
"Mistura Copaiba Comp."	F. S. Stevens	1,286	Dec. 4, 1877	12	943
"Model Varnish Brushes"	J. S. White	959	Jan. 23, 1877	11	114
"Moody's Concentrated Fluid Extract of Sarsaparilla, Stillingia, and Yellow Dock."	J. C. Moody	1,135	July 31, 1877	12	191
"Morocco Moorish Cigarettes"	J. Beleshe	981	Feb. 20, 1877	11	291
"Mrs. Mary J. Bingham's Sweet Tar Balsam"	H. Gosling	968	Feb. 6, 1877	11	199
"Murison's Catarrh and Bronchial Cigarettes, etc."	J. Murison	1,260	Nov. 20, 1877	12	844
"Murison's Catarrh & Bronchial Fumigator"	J. Murison	1,168	Aug. 28, 1877	12	355
"Murphy Pledge Charms"	T. McFadden, jr	1,029	Apr. 10, 1877	11	601
N.					
"Nas. Schlumberger & Cie., Guebwiller"	L. Rheims	1,097	June 26, 1877	11	1115
"Natural Hair Restorer, Carboline"	Kennedy & Co	1,313	Dec. 18, 1877	12	1028
"Nature's Remedy, Bedford Alum & Iodine Mass."	Bedford Alum and Iodine Springs Company.	1,128	July 31, 1877	12	191
"Neufeld's Italian Balm"	J. Hart and A. A. Myers	1,156	Aug. 21, 1877	12	315
"Neurotic, the Great External Remedy for Neuralgia"	Holleman & Co	1,220	Oct. 30, 1877	12	717
"New Patent Screw Wrenches"	Collins Company	1,288	Dec. 4, 1877	12	943
"New Patent Screw Wrenches"	Collins Company	1,290	Dec. 4, 1877	12	943
"New York Nipple Shield"	G. M. Nichols	980	Feb. 20, 1877	11	291
"Niles Cathartic Pills, &c."	E. C. Ensign	1,178	Sept. 11, 1877	12	432
"No. 4,711 Eau De Cologne"	F. W. Fuchs	1,110	July 10, 1877	12	55
"Non-Corrosive Cylinder Oil"	E. H. Kellogg	1,146	Aug. 7, 1877	12	230
"Notice"	D. Dick	1,059	May 15, 1877	11	835
"Notice"	Marsh & Co	1,016	Mar. 27, 1877	11	505
"Novelty Corset Works"	Donaldson Brothers	1,218	Oct. 30, 1877	12	717
"Nursery Beer"	B. Momenthy	969	Feb. 6, 1877	11	199
O.					
"Oakdale Mills"	O. C. Wheeler	1,322	Dec. 18, 1877	12	1028
"One of the Caddies in this Case Contains an Order, &c."	Merchants Tobacco Company	1,293	Dec. 11, 1877	12	982
"One Package of Yeast is Sufficient for one Baking of Three and one-half Pounds of Flour."	Gaff, Fleischmann & Co	949	Jan. 16, 1877	11	71
"Orange Wine"	B. Genovar	1,021	Apr. 3, 1877	11	555
"Otaki Root Beer"	J. Matthews	1,319	Dec. 18, 1877	12	1028
"Otaki Root Beer from Matthews Apparatus"	J. Matthews	1,318	Dec. 18, 1877	12	1028
"Our Own"	G. B. Durfee	1,140	Aug. 7, 1877	12	230
P.					
"Painted Window-Screen Cloth"	Clinton Wire Cloth Company	947	Jan. 16, 1877	11	71
"Parce's Diphtheria Cure"	J. E. Parce	1,010	Mar. 20, 1877	11	461
"Peck's Cod-Liver Oil and Wild Cherry Bark"	H. T. Peck	963	Jan. 30, 1877	11	155
"Pedro"	Paper Fabrique Company	1,271	Nov. 27, 1877	12	892
"Pennsylvania Baking Powder"	H. C. Hopper	1,134	July 31, 1877	12	191
"Perfect Solvent, for Removing Grease, Paint, Dirt, Stains, &c."	Drake & Woodman	1,186	Sept. 18, 1877	12	479
"Persian Mead"	J. Matthews	1,282	Dec. 4, 1877	12	943
"Ph. Dornbusch's Champagne of Herbs"	P. Dornbusch	1,051	May 8, 1877	11	791
"Phenix Nursing Bottle"	Whitall, Tatum & Co	1,035	Apr. 17, 1877	11	643
"Physicians Sample. Wyeth's Dialysed Iron"	J. Wyeth & Brother	1,069	May 22, 1877	11	881
"Playing-Card Back"	Paper Fabrique Company	1,328	Dec. 25, 1877	12	1078
"Postal Paper"	A. G. Busby	965	Feb. 6, 1877	11	199
"Potato Pest Poison"	The Dodi Chemical Works	1,099	June 26, 1877	11	1115
"Powder"	B. B. Eaton	1,325	Dec. 25, 1877	12	1078
"Presley B. Combs' Horse Powders"	P. B. Combs	966	Feb. 6, 1877	11	199
"Print for Signs"	A. Moore	1,199	Oct. 16, 1877	12	628
"Prof. Liebig's Double-Bottle Hair Renewer"	C. C. and E. I. Fischer	1,299	Dec. 11, 1877	12	983
"Professor Lilley's Embrocation for Rheumatism or Lumbago, &c."	Professor Lilley	951	Jan. 16, 1877	11	71
"Prof. Shaw's Chiropedin, or Perfumed Foot Powder"	Little & Shaw	1,107	July 3, 1877	12	9
"Pure Copper Distilled Soft Mash Whisky"	Miami Distilling Company	1,182	Sept. 18, 1877	12	479
"Pyro-Quinia &c."	Merrick, Otis & Co	1,294	Dec. 11, 1877	12	982
R.					
"Raven Paste Stove Polish"	N. H. Parker	984	Feb. 20, 1877	11	291
"Reec's Patent Compound Fire Extinguisher"	A. Tenner	1,098	June 26, 1877	11	1115
"Reese's Patent Adjustable Stencil Letters"	O. G. Bryant	982	Feb. 20, 1877	11	291
"Regalia de Preferencia"	R. S. Strobel	1,215	Oct. 23, 1877	12	670
"Return Pop Corn Ball"	B. F. Huber	1,165	Aug. 28, 1877	12	354
"Richard L. Brown's Horse Eye Water"	R. L. Brown	1,117	July 17, 1877	12	97
"Ricksecker's Nurser"	T. Ricksecker	1,304	Dec. 11, 1877	12	983
"Rocky Mountain Cough Syrup"	W. H. Culmer	1,162	Aug. 28, 1877	12	354
"Round Caps"	G. W. McGill	1,303	Dec. 11, 1877	12	983
"Round Tops"	G. W. McGill	1,302	Dec. 11, 1877	12	983
"Rumford Yeast Powder"	Rumford Chemical Works	938	Jan. 2, 1877	11	6
S.					
"Sacred to the Memory of"	J. W. Webber	1,091	June 19, 1877	11	1063

Alphabetical list of labels—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page
"Sancho"	J. B. Clements	1,180	Sept. 11, 1877	12	432
"Sanderson's Soap Crystals"	Sanderson, Buchanan & Co	1,137	July 31, 1877	12	191
"Sapo. A Saponaceous Tooth Elixir"	J. King, jr	1,022	Apr. 3, 1877	11	555
"Scene on a Race Course"	Heppenheimer & Maurer	1,086	June 12, 1877	11	1013
"Schermerhorn's Tonic Extract of Wine"	G. W. Schermerhorn	1,076	May 29, 1877	11	927
"Scratch My Back"	G. H. Browne	991	Mar. 6, 1877	11	377
"Self-Indexing Scrap Book"	E. H. Smith	1,064	May 15, 1877	11	835
"Self Kindlings"	J. S. Paine	1,095	June 26, 1877	11	1115
"Self-Raising Pan-Cake Flour"	S. S. Marvin & Co	1,114	July 10, 1877	12	55
"Self Recommending Eye Salve for Diseased Eyes"	C. Sander	1,032	Apr. 10, 1877	11	601
"S. H. Kennedy's Concentrated Extract of Pinus Canadensis"	S. H. Kennedy	1,112	July 10, 1877	12	55
"S. H. Kennedy's Pinus Canadensis Ointment"	C. F. Goodman	1,230	Nov. 6, 1877	12	757
"Simpson's Topocan Brand Diamond Creamery Butter"	G. W. Simpson	1,247	Nov. 6, 1877	12	757
"Soda Water"	J. Matthews	1,283	Dec. 4, 1877	12	943
"Soda Water from Matthews Apparatus"	J. Matthews	1,281	Dec. 4, 1877	12	943
"Solidified Glycerine"	C. H. Beers	998	Mar. 13, 1877	11	422
"Something New"	S. S. Marvin & Co	1,113	July 10, 1877	12	55
"Spalding's Celebrated Prepared Glue"	Hall & Ruckel	1,227	Oct. 30, 1877	12	718
"Special Hand Sewing Cotton"	L. Rheims	1,096	June 26, 1877	11	1115
"Special Notice"	J. D. Park	1,196	Oct. 9, 1877	12	36
"Special Notice to Dealers and Consumers"	J. D. Park	986	Feb. 20, 1877	11	291
"Statuette"	Washington Manufacturing Company.	1,216	Oct. 23, 1877	12	670
"Steele's Pain Eradicator"	Crane & Brigham	1,065	May 22, 1877	11	881
"St. Louis Dental Co."	J. Spyer and E. C. Chase	1,151	Aug. 14, 1877	12	270
"Stock Powder"	D. G. Stoughton	1,179	Sept. 11, 1877	12	432
"Stuart, Peterson & Co.'s Enameled Ware"	Stuart, Peterson & Co	1,183	Sept. 18, 1877	12	479
"Stuart, Peterson & Co.'s Tinned and Enameled Ware"	Stuart, Peterson & Co	1,184	Sept. 18, 1877	12	479
"Superfine Coach Color"	Heath & Milligan	977	Feb. 20, 1877	11	291
"Superior Pure White Lead"	Heath & Milligan	976	Feb. 20, 1877	11	291
"Sweet Cathartin"	H. Schroeder	1,063	May 15, 1877	11	835
"Sweet Tar Drops"	H. Gosling	941	Jan. 9, 1877	11	40
"Swiss Health Tea"	J. Pfenninger	1,023	Apr. 3, 1877	11	555
T.					
"Tartarian Koomis, Made from Pure Milk Undiluted by Whey"	G. I. McKelway	1,321	Dec. 18, 1877	12	1028
"Tea. Price 50 cts. per pound"	T. White	1,088	June 12, 1877	11	1013
"The Andes Shirt"	Fechheimer, Goodkind & Co	948	Jan. 16, 1877	11	71
"The Best Domestic"	J. M. Davis	1,264	Nov. 27, 1877	12	892
"The Best Sole Leather Tip Made"	J. Mundell & Co	1,327	Dec. 25, 1877	12	1058
"The Brightest and Best Stove Polish"	C. Humphreville and A. C. Killheffer.	956	Jan. 23, 1877	11	113
"The Comic Playing Cards of Fortune"	Gardiner & Varney	1,164	Aug. 28, 1877	12	354
"The Directions Must Be Followed"	Marsh & Co	1,020	Mar. 27, 1877	11	505
"The Dressmaker's Square"	C. H. Griffin	1,052	May 8, 1877	11	791
"The Electro Magnetic Anodyne"	N. Haas	1,039	Apr. 24, 1877	11	691
"The Goodyear Improved No. 1 Household Enema Syringe"	Goodyear Rubber Company	1,223	Oct. 30, 1877	12	718
"The Goodyear Practical Syringe"	Goodyear Rubber Company	1,221	Oct. 30, 1877	12	717
"The Goodyear Superior Syringe No. 1"	Goodyear Rubber Company	1,222	Oct. 30, 1877	12	718
"The Handy Packet, Indigo Bluing"	W. P. Draper	1,197	Oct. 16, 1877	12	628
"The International Starch Co.'s Corn Starch"	International Starch Company	1,297	Dec. 11, 1877	12	982
"The International Starch Co.'s Laundry Starch"	International Starch Company	1,298	Dec. 11, 1877	12	983
"The K. Imperial Viennese Purgative Blood Purifying Specific"	C. Biedenfeld	1,057	May 15, 1877	11	834
"The Magnetic Remedy"	J. Blankman	1,217	Oct. 30, 1877	12	717
"The Non-Explosive Chemical Gas for Illuminating Purposes"	I. Strahlem	1,154	Aug. 14, 1877	12	271
"The Patent Machine-Made Metallic Brush"	B. Poland	1,040	Apr. 24, 1877	11	691
"The Ready Cleanser"	C. F. Gerry	1,219	Oct. 30, 1877	12	717
"The Stock Condition Powder"	Painter & Calvert	1,030	Apr. 10, 1877	11	601
"The Stock Condition Powder"	Painter & Calvert	1,147	Aug. 7, 1877	12	231
"The Stock Liniment"	Painter & Calvert	1,121	July 17, 1877	12	97
"The Union Dressing, &c."	G. A. Moss	1,185	Sept. 18, 1877	12	479
"The Universal Detergent Toilet Soap"	J. B. Mears	1,198	Oct. 16, 1877	12	628
"These Buttons Obtained the Only Prize Awarded to Pearl Buttons, &c."	J. Thornton & Co	1,024	Apr. 3, 1877	11	555
"This Box Contains an Order, &c."	Merchants Tobacco Company	1,292	Dec. 11, 1877	12	982
"This Sole is Fastened with Screws"	Bay State Shoe and Leather Company.	1,092	June 26, 1877	11	1115
"Thurston's Great Scrofula Cure and Blood Purifier"	Thurston & Co	1,000	Mar. 13, 1877	11	422
"Toledo Banner"	C. R. Messinger	1,007	Mar. 20, 1877	11	461
"Trefoil Inkstand"	B. Brower	1,205	Oct. 16, 1877	12	628
"Trott's Horse Liniment, etc."	C. H. Trott	1,255	Nov. 13, 1877	12	799
"True Mineral Waters"	J. Matthews	1,280	Dec. 4, 1877	12	943
U.					
"Unbolted Wheat Flour from Selected Wheat"	N. Brooke	1,038	Apr. 24, 1877	11	691
"United States Steam Feed Co."	G. L. Johnson	1,054	May 8, 1877	11	791
"Universal Pile Pills"	F. E. Smith & Co	1,296	Dec. 11, 1877	12	982
"Use Fragrance. It Cleanses the Teeth, Hardens the Gums, and Deodorizes the Breath."	E. Bugbee & Co	1,013	Mar. 27, 1877	11	505
V.					
"Van Buskirk's Fragrant Sozodont"	Hall & Ruckel	1,241	Nov. 6, 1877	12	757
"Vienna Coffee"	Weikel & Smith Spice Company	1,100	June 26, 1877	11	1115
"Vinton's California Golden Honey Syrup"	O. M. Vinton	1,206	Oct. 16, 1877	12	628
"Volney's Wild Cherry Cough Candy"	C. H. Davis	1,193	Oct. 9, 1877	12	36
"Vreeland's Medicated Wine of Wild Cherries"	B. Vreeland	1,225	Oct. 30, 1877	12	718
"Vreeland's Tonic Wine of Wild Cherries"	B. Vreeland	1,226	Oct. 30, 1877	12	718
"Vulcanized Rubber Belting"	New York Belting and Packing Company.	974	Feb. 13, 1877	11	252
"Vulcanized Rubber Belting"	New York Belting and Packing Company.	975	Feb. 13, 1877	11	252

Alphabetical list of labels—Continued.

Title.	Name.	No.	Date.	Official Gazette.	
				Vol.	Page.
W.					
"Washing Made Easy"	T. H. Fulton & Son	1,207	Oct. 23, 1877	12	670
"Water Lily"	Heppenheimer & Maurer	1,259	Nov. 20, 1877	12	844
"Wedge Paint Brushes"	J. S. White	960	Jan. 23, 1877	11	114
"White Ash Cigar"	E. Bross	1,307	Dec. 18, 1877	12	1028
"Whitmans Instantaneous Chocolate"	S. F. Whitman & Son	990	Feb. 27, 1877	11	333
"Wilbor's Pure Cod Liver Oil and Phos. Lime"	A. B. Wilbor	971	Feb. 6, 1877	11	199
"Wild Cherry Pastilles"	Edwards & Hutchison	967	Feb. 6, 1877	11	199
"Wilson's Rumford Yeast Powder"	Rumford Chemical Works	970	Feb. 6, 1877	11	199
"Witch Hazel Cough Balsam"	B. W. Dyer	1,278	Dec. 4, 1877	12	943
"Witch Hazel Liniment"	B. W. Dyer	1,172	Sept. 4, 1877	12	397
"Witch Hazel Salve"	B. W. Dyer	1,277	Dec. 4, 1877	12	943
"Wm. Sears & Co., Cracker Bakers"	W. Sears & Co	1,115	July 10, 1877	12	55
"Wright's Cod Liver Oil and Cream of Tar"	T. D. Toy & Co	1,072	May 22, 1877	11	881
"Wright's Improved American Anti-Pest"	G. S. Wright	1,078	May 29, 1877	11	927
"Wright's Sure Cure for Rheumatism"	E. A. Wright, F. Nielsen, and E. W. Hodges.	1,056	May 8, 1877	11	791
"Wyeth's Dialysed Iron"	J. Wyeth & Brother	1,068	May 22, 1877	11	881
Y.					
"Yalobusha Tonic"	M. H. Tharpe	1,084	June 5, 1877	11	973
"Yarnall's Exterminator for Destroying Rats, Mice, Roaches, etc."	A. H. Yarnall's Sons	1,256	Nov. 13, 1877	12	799
"Yarnall's Unequalled Cattle Powder"	A. H. Yarnall's Sons	1,257	Nov. 13, 1877	12	799

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